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This episode is sponsored by a company I've literally been using for over 15 years now and that is 511.

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00:00:06,800 --> 00:00:13,040

Now my introduction to their products began when I started wearing 511 uniforms years ago for Anaheim Fire Department.

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00:00:13,160 --> 00:00:18,600

And since then I have acquired a host of their backpacks and luggage which have literally been around the world with me.

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00:00:19,080 --> 00:00:22,760

The backpack where I keep all my recording equipment is a 511 backpack.

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00:00:23,160 --> 00:00:27,000

And then most of my civilian gear, the clothes that I wear are also 511.

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00:00:27,000 --> 00:00:31,520

Now more recently they've actually branched out into the brick and mortar stores.

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00:00:31,640 --> 00:00:36,360

So for example Gainesville where I do jiu-jitsu has a beautiful 511 store.

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00:00:36,360 --> 00:00:39,240

So if you are a fire department, a law enforcement agency,

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00:00:39,760 --> 00:00:45,200

you now have access to an entire inventory of clothing and equipment in these 511 stores.

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00:00:45,400 --> 00:00:48,540

Now I've talked about the range of shoes they have and how important

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00:00:48,840 --> 00:00:53,200

minimizing weight in our footwear is when it comes to our back health, knee health, etc.

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00:00:53,200 --> 00:00:59,080

I've talked about their unique uniforms that are fitted for either male or female first responders.

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00:00:59,080 --> 00:01:02,960

And then I want to highlight one new area, their CloudStrike packs.

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00:01:03,160 --> 00:01:08,360

For those of you who enjoy hiking, this would even be an application I believe for the wildland community.

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00:01:08,400 --> 00:01:16,760

They've created an ultra light pack now with a hydration system built in for rucking, running or other long-distance events.

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00:01:17,000 --> 00:01:21,200

Now as always 511 is offering you, the audience of the Behind the Shield podcast,

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00:01:21,200 --> 00:01:24,600

15% off every purchase that you make.

18

00:01:24,800 --> 00:01:33,000

So if you use the code SHIELD15, that's S-H-I-E-L-D-1-5 at 511tactical.com,

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00:01:33,160 --> 00:01:36,280

you will get that 15% off every single time.

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00:01:36,680 --> 00:01:41,440

So if you want to hear more about 511 and their origin story, go to episode

21

00:01:42,360 --> 00:01:47,520

338 of Behind the Shield podcast with their CEO Francisco Morales.

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00:01:47,520 --> 00:01:50,520

Welcome to the Behind the Shield podcast. As always, my name is James Gearing.

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00:01:50,520 --> 00:01:53,760

And this week I have a very important conversation,

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00:01:53,760 --> 00:02:01,520

especially when it comes to trying to move the firefighter work week to a 24-72 shift pattern,

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00:02:01,520 --> 00:02:04,560

which would result in a 42 hour work week,

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00:02:04,720 --> 00:02:10,320

a far cry from the 56 to 80 hour work weeks that a lot of our firefighters are working,

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00:02:10,320 --> 00:02:12,320

especially when they're understaffed.

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00:02:12,800 --> 00:02:16,120

Now in this conversation, so many people have asked me,

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00:02:16,120 --> 00:02:18,120

James, can you show me the research?

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00:02:18,120 --> 00:02:22,920

And so I reached out to my friend who's arguably one of the most respected researchers

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00:02:22,920 --> 00:02:27,120

when it comes to health in the fire service, and that is Sarah Jenke.

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00:02:27,600 --> 00:02:32,520

Now we've done two podcasts before, episode 245 and 401,

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00:02:32,520 --> 00:02:35,120

where she really kind of breaks down some other areas.

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00:02:35,120 --> 00:02:39,920

But this time we honed solely on sleep deprivation and shift work

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00:02:40,120 --> 00:02:45,920

so I could kind of build the understanding of how detrimental both chronically and on a daily basis

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00:02:45,920 --> 00:02:51,520

and acutely this is not only in our performance and obviously the lives lost through mistakes,

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00:02:51,520 --> 00:02:53,920

whether it's driving, whether it's pushing the wrong meds

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00:02:53,920 --> 00:02:57,320

and the financial element of the lawsuits that are attached to that,

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00:02:57,720 --> 00:03:00,720

but also the horrendous chronic impact.

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00:03:01,120 --> 00:03:03,920

And as you will hear everywhere from mental health to cancer,

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00:03:03,920 --> 00:03:06,320

it is a huge common denominator.

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00:03:06,520 --> 00:03:10,120

But one of the most startling things that she brought to this conversation

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00:03:10,120 --> 00:03:12,120

was the impact on our fertility,

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00:03:12,120 --> 00:03:17,920

but also the massive increase we have seen in our profession when it comes to childhood diseases,

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00:03:17,920 --> 00:03:21,920

so pediatric cancers and autism and some of these other areas.

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00:03:22,120 --> 00:03:24,720

Now to round off this conversation, as you will hear,

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00:03:24,720 --> 00:03:31,120

there is just simply not much money given to the fire service when it comes to researching this ill health.

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00:03:31,320 --> 00:03:33,920

So Sarah talks about the studies are out there.

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00:03:33,920 --> 00:03:38,320

Obviously she talks kind of an apples to oranges comparison with some of the other professions,

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00:03:38,320 --> 00:03:42,120

but she also highlights how little research has been done in those areas.

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00:03:42,120 --> 00:03:48,320

So therefore waiting for quote-unquote research is only going to prolong the suffering within the fire service.

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00:03:48,320 --> 00:03:55,120

So really understanding the common sense element that a shorter workweek would improve physical and mental health

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00:03:55,120 --> 00:04:00,120

and have a huge cost savings is a beautiful takeaway from this conversation.

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00:04:00,520 --> 00:04:04,520

Now before we get to this interview, as I say every week, please just take a moment,

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00:04:04,720 --> 00:04:06,720

go to whichever app you listen to this on,

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00:04:06,720 --> 00:04:10,720

subscribe to the show, leave feedback and leave a rating.

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00:04:10,920 --> 00:04:15,320

Every single five-star rating truly does elevate this podcast,

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00:04:15,320 --> 00:04:17,720

therefore making it easier for others to find.

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00:04:17,920 --> 00:04:22,720

And this is a free library of well over 900 episodes now.

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00:04:22,920 --> 00:04:28,520

So all I ask in return is that you help share these incredible men and women stories

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00:04:28,720 --> 00:04:32,720

so I can get them to everyone else on planet Earth who needs to hear them.

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00:04:32,720 --> 00:04:40,520

So with that being said, I welcome back onto the show, Dr. Sara Jenke. Enjoy.

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00:04:40,520 --> 00:04:59,520

Music

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00:04:59,720 --> 00:05:02,520

Well, Sara, I want to say firstly, welcome back.

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00:05:02,720 --> 00:05:06,920

I think this is number three, if I'm not mistaken, of our conversations recorded,

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00:05:07,120 --> 00:05:09,320

you know, and then obviously we've had numerous outside of that.

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00:05:09,320 --> 00:05:12,920

So welcome back to the Behind the Shield podcast today.

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00:05:13,120 --> 00:05:15,320

Excited to be back. Always enjoy it.

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00:05:15,520 --> 00:05:16,920

Always a good time.

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00:05:17,120 --> 00:05:19,920

So where on planet Earth are we finding you today?

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00:05:20,120 --> 00:05:23,320

I am actually at home today and I'm very excited to be home.

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00:05:23,520 --> 00:05:29,720

I have been on the road the last few weeks and I love doing that and having like

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00:05:29,920 --> 00:05:32,320

outreach, but there's nowhere better than home.

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00:05:32,520 --> 00:05:34,520

Nowhere better than my own bed.

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00:05:34,720 --> 00:05:38,520

There's a lot of guilt as a parent not being around with your children either.

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00:05:38,520 --> 00:05:39,720

So much.

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00:05:39,920 --> 00:05:44,920

And I try to teach them like, you know, this the work that I'm doing is important.

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00:05:44,920 --> 00:05:47,520

And here's how it's affecting the world and all those types of things.

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00:05:47,520 --> 00:05:50,120

And I'm like really trying to be positive about that.

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00:05:50,120 --> 00:05:52,720

And I try and take them when we can, when I can take them places.

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00:05:52,720 --> 00:05:55,520

But the end of the day, when my daughter's like, but I want you home, I'm like,

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00:05:55,720 --> 00:05:58,120

I want to be home too.

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00:05:58,320 --> 00:06:01,520

Well, that's actually a beautiful segue to what we're going to talk about today,

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00:06:01,720 --> 00:06:06,400

because I just had a couple of Firewives on recently behind the Women Behind the

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00:06:06,400 --> 00:06:14,120

Dear Chiefs podcast and one of them had talked about when their son was very small.

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00:06:14,320 --> 00:06:16,120
He was all in on the fire service.

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00:06:16,120 --> 00:06:17,520
He had the costume.

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00:06:17,520 --> 00:06:19,160
He had the trucks. He had everything.

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00:06:19,360 --> 00:06:23,680
And they happen to have a conversation with him when he was now, I think, 14, 15.

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00:06:23,880 --> 00:06:25,680
And they said, you know, you think you're

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00:06:25,680 --> 00:06:27,160
going to become a firefighter like your dad.

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00:06:27,360 --> 00:06:30,840
And he was basically the version of fuck no.

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00:06:31,040 --> 00:06:33,280
He said, and they asked, well, why?

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00:06:33,480 --> 00:06:35,800
And he said, because dad's never home.

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00:06:35,800 --> 00:06:37,040
And this is the thing.

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00:06:37,040 --> 00:06:40,160
There's a difference between the mission, the purpose, the job.

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00:06:40,360 --> 00:06:43,520

That is why I would argue the best profession on the planet.

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00:06:43,520 --> 00:06:47,720

I mean, I'm a little biased and the environment that we work people in.

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00:06:47,720 --> 00:06:49,480

Those are two separate conversations.

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00:06:49,480 --> 00:06:51,880

So I'm really excited to kind of unpack that with you today.

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00:06:52,080 --> 00:06:57,080

Yeah, it's a complex question.

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00:06:57,280 --> 00:06:58,400

And I do.

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00:06:58,400 --> 00:07:01,280

I think there's it's well, I think I have the best job in the world

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00:07:01,280 --> 00:07:03,720

because I get to work with fire service and sleep in my own bed.

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00:07:03,720 --> 00:07:10,200

But, yeah, it's not there's not an easier, straightforward answer to any of the

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00:07:10,200 --> 00:07:12,400

questions, but that's what makes it interesting.

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00:07:12,600 --> 00:07:13,920

And more research is always needed.

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00:07:13,920 --> 00:07:15,320
So it's job security for me.

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00:07:15,520 --> 00:07:16,400
Absolutely.

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00:07:16,600 --> 00:07:19,840
Well, you are what we refer to as culturally competent as well.

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00:07:20,040 --> 00:07:24,040
So just give an overview of your kind of family connection to the fire service.

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00:07:24,240 --> 00:07:27,160
Yes. Well, and I also never considered being

113
00:07:27,160 --> 00:07:31,320
a firefighter, which it hadn't occurred to me until one of the women from Women

114
00:07:31,320 --> 00:07:34,320
Fire said, did you ever think about doing it? I'm like, oh, no, God, no.

115
00:07:34,520 --> 00:07:36,520
Sounds awful.

116
00:07:37,280 --> 00:07:42,840
And part of it was that, you know, dad had to be gone, especially when as a chief and

117
00:07:43,560 --> 00:07:45,080
being.

118
00:07:46,040 --> 00:07:49,800
You know, just never know when he had to go for something and never and kind of

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00:07:50,000 --> 00:07:53,880

like even just the psychology of not being present in the moment a lot of times.

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00:07:54,080 --> 00:07:56,600

So I also would not want to be a fire chief.

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00:07:56,600 --> 00:07:59,840

That also sounds like a horrible job, but they're fun to study.

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00:07:59,840 --> 00:08:03,400

But, yeah, I grew up in the fire service and

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00:08:03,600 --> 00:08:04,720

my dad was the only child.

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00:08:04,920 --> 00:08:09,360

So all my family, extended family on his side was all fire service folks and got

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00:08:09,560 --> 00:08:14,120

into research because I was going to be a clinician with kids working with kids

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00:08:14,120 --> 00:08:15,800

and then hated working with their parents.

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00:08:16,000 --> 00:08:19,000

So needed a plan B and had done military

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00:08:19,000 --> 00:08:22,640

research in grad school and fire service that just started funding research.

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00:08:22,640 --> 00:08:26,520

So that started like I think my first funded grant was 17 years ago now,

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00:08:26,720 --> 00:08:28,600
which makes me feel old.

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00:08:28,600 --> 00:08:32,120
I entered the fire service 20 years ago, 2004.

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00:08:32,320 --> 00:08:33,960
I don't like numbers like that.

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00:08:34,160 --> 00:08:37,000
Doesn't that seem like the 80s?

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00:08:37,000 --> 00:08:41,120
Someone said the 80s was almost like early 80s.

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00:08:41,320 --> 00:08:43,400
That's almost like 50, 50 years.

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00:08:43,600 --> 00:08:45,000
I'm like, I don't know.

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00:08:45,200 --> 00:08:46,520
I saw that same post.

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00:08:46,520 --> 00:08:49,480
I think it was a film, something that was released in 85.

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00:08:49,480 --> 00:08:52,680
And they're like, just so you know, this would have been 50 years ago.

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00:08:52,880 --> 00:08:54,000
Oh, my God.

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00:08:54,200 --> 00:08:55,640

No, thank you.

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00:08:55,840 --> 00:08:56,200

Yeah.

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00:08:56,200 --> 00:08:57,360

I guess it was the 70s.

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00:08:57,360 --> 00:08:58,640

Had to be 70s to get the math right.

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00:08:58,640 --> 00:09:00,840

But even so, it was terrible because I was born in 74.

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00:09:01,040 --> 00:09:02,440

So,

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00:09:02,640 --> 00:09:04,400

well, with that, let's start at the beginning.

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00:09:04,600 --> 00:09:07,320

Then you enter this field.

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00:09:07,520 --> 00:09:10,760

I'm always asked and we're going to get into this exact conversation.

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00:09:10,960 --> 00:09:14,480

Well, James, what about the research on shift work on this on that?

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00:09:14,680 --> 00:09:18,480

What was the landscape of health research

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00:09:18,680 --> 00:09:21,160
in firefighters when you entered 17 years ago?

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00:09:21,360 --> 00:09:22,720
Oh, yeah, almost nothing.

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00:09:22,920 --> 00:09:26,400
So about 80 percent of the research that's been done on firefighter health is

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00:09:26,400 --> 00:09:29,800
the last basically since FEMA started funding research.

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00:09:30,000 --> 00:09:33,720
And that was, I think, when I think about 16, 17 years ago.

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00:09:33,760 --> 00:09:35,280
No, it must have been a little bit more than that.

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00:09:35,480 --> 00:09:36,440
Eighteen years, maybe now.

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00:09:36,640 --> 00:09:39,360
But FEMA has the fire prevention and safety underneath that.

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00:09:39,560 --> 00:09:43,960
They have a tiny pot of money, like maybe five or five studies a year

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00:09:44,160 --> 00:09:45,240
on firefighter health.

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00:09:45,440 --> 00:09:50,120
And it's not if you look at research now compared to where it was then,

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00:09:50,320 --> 00:09:53,560

like it's exploded and there are so many groups doing good work.

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00:09:53,560 --> 00:09:55,240

And we're learning so much more about

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00:09:55,240 --> 00:09:58,560

cancer, cardiovascular disease, mental health, reproductive health.

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00:09:58,760 --> 00:10:02,200

And like every question that we answer leads to more

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00:10:02,400 --> 00:10:04,240

leads to more questions, which is awesome.

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00:10:04,440 --> 00:10:08,440

And it's not that every every research team is funded by FEMA,

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00:10:08,640 --> 00:10:12,480

but I have yet to find an article that doesn't reference some of the work that

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00:10:12,480 --> 00:10:15,600

was funded by FEMA. So I think it just really raised the awareness.

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00:10:15,800 --> 00:10:17,680

And then, you know, then you have news

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00:10:17,880 --> 00:10:22,040

stories about cancer and firefighters, which sparks more interest in research

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00:10:22,040 --> 00:10:22,760

and those types of things.

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00:10:22,760 --> 00:10:26,520

And so, I mean, we used to struggle because like the big funders,

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00:10:26,520 --> 00:10:30,400

like National Institutes of Health, because firefighters such a small population.

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00:10:30,600 --> 00:10:35,400

Initially, like the conversation was it was really nearly impossible to get

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00:10:35,600 --> 00:10:37,880

research funded by NIH.

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00:10:38,080 --> 00:10:41,560

But now they're, you know, they're they fund research on firefighter health

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00:10:41,760 --> 00:10:44,200

sometimes still challenge, but it's still possible.

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00:10:44,400 --> 00:10:46,480

It's now possible, which is awesome.

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00:10:46,680 --> 00:10:50,560

What I've seen and again, this is through my own awakening.

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00:10:50,560 --> 00:10:54,160

It's not like I was aware of this 20 years ago because I wasn't.

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00:10:54,360 --> 00:10:58,920

But what I realize is there's there's a kind of myopia in research sometimes.

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00:10:58,920 --> 00:11:01,120

And so and I've talked about this many times.

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00:11:01,320 --> 00:11:04,680

If you look at firefighter cancer, it was for the longest time,

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00:11:04,880 --> 00:11:09,600

the carcinogens completely legitimate, same way as COVID-19 is a virus that will

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00:11:09,800 --> 00:11:12,880

mess you up if you are immune compromised, for example.

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00:11:13,080 --> 00:11:15,200

So definitely a factor.

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00:11:15,400 --> 00:11:17,400

And then when it comes to the mental health,

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00:11:17,400 --> 00:11:20,840

oh, well, it's because, you know, you saw this thing, you were at Grenfell,

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00:11:21,040 --> 00:11:22,760

you were, you know, the Vegas shooting.

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00:11:22,960 --> 00:11:24,640

That's why you're struggling.

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00:11:24,840 --> 00:11:28,480

And then you kind of reverse engineer and you look at all these other factors.

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00:11:28,680 --> 00:11:32,520

And what I've noticed, you know, and I think even until very recently is that

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00:11:32,720 --> 00:11:36,920

when it comes to cancer, there's no talk at all about sleep deprivation

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00:11:37,120 --> 00:11:40,480

and the breakdown of our immunity when it comes to mental health.

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00:11:40,680 --> 00:11:41,560

It's the same thing.

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00:11:41,560 --> 00:11:45,680

There's no discussion that, hey, by the way, we use sleep deprivation to weed out

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00:11:45,680 --> 00:11:49,520

people in selection for special forces and to interrogate and torture.

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00:11:49,720 --> 00:11:52,840

You know, there's no conversation of the link with mental health and sleep

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00:11:53,040 --> 00:11:54,560

deprivation as well.

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00:11:54,760 --> 00:11:59,520

So I have to admit, I one of my favorite

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00:11:59,720 --> 00:12:02,760

favorite questions to ask a scientist is what were you wrong about?

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00:12:02,760 --> 00:12:05,800

Like, what is something you used to believe that you don't believe any longer?

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00:12:06,000 --> 00:12:08,440

And I think one of the things that I have

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00:12:08,640 --> 00:12:14,040

to admit to is that I did not think sleep was as important as

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00:12:14,040 --> 00:12:18,080

I now think it is. You know, I used to think of it as like it's important.

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00:12:18,280 --> 00:12:20,920

It's a component of overall health and wellness.

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00:12:21,120 --> 00:12:23,120

The man, the more I started getting it,

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00:12:23,120 --> 00:12:27,280

someone asked me to do a presentation on sleep and I had like some data like we

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00:12:27,280 --> 00:12:29,240

published an excessive daytime sleepiness.

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00:12:29,440 --> 00:12:33,200

And so it's like some broad things, but I hadn't really dug into it.

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00:12:33,400 --> 00:12:36,760

All right. So I said, OK, I can I can put this presentation together.

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00:12:36,960 --> 00:12:38,840

So I started pulling the literature on it.

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00:12:39,040 --> 00:12:42,200

And by the end of that, by the time I gave that presentation,

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00:12:42,200 --> 00:12:48,320

I started it with basically like this is the biggest risk that you face is the

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00:12:48,520 --> 00:12:50,640

sleep deprivation and interrupted circadian rhythms.

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00:12:50,840 --> 00:12:55,680

And I I don't think I will ever say I'm wrong about that statement.

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00:12:55,880 --> 00:12:59,640

Given the research and the more research we do.

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00:12:59,840 --> 00:13:05,520

So, yeah, I think that for a number of for a number of evidence based reasons,

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00:13:05,720 --> 00:13:11,920

I think that I just I think it's I think it drives a lot.

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00:13:11,920 --> 00:13:15,240

And it's completely under recognized.

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00:13:15,440 --> 00:13:16,400

Yeah.

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00:13:16,600 --> 00:13:21,120

When how long ago was that study that you had to put on sleep with that presentation?

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00:13:21,320 --> 00:13:23,680

Probably about five years ago.

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00:13:23,880 --> 00:13:28,160

I mean, we asked questions before, like we asked questions about sleep.

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00:13:28,360 --> 00:13:30,120

And so we included it.

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00:13:30,120 --> 00:13:31,320

We looked at it as a covariate.

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00:13:31,520 --> 00:13:34,360
But I just don't think it wasn't until then.

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00:13:34,560 --> 00:13:38,320
And then Joel Billings from Oklahoma, I've done some work with him.

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00:13:38,520 --> 00:13:40,800
And he is the other thing that really convinced me.

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00:13:40,800 --> 00:13:42,240
I was like, yeah, all right.

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00:13:42,440 --> 00:13:44,360
You're right. I'm wrong.

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00:13:44,560 --> 00:13:47,520
I'll go with what you have to say.

235
00:13:47,720 --> 00:13:51,680
Because I want to say that might have been right around the time we did our first

236
00:13:51,880 --> 00:13:56,320
interview and I remember that you weren't all in on the sleep thing at that point.

237
00:13:56,320 --> 00:13:59,320
So that's really interesting that you say that now, because obviously there's been

238
00:13:59,320 --> 00:14:02,680
an evolution and don't get me wrong, it was only three short years prior to that

239
00:14:02,880 --> 00:14:06,160
that I heard Kirk pass parsley on the barbell shrug podcast.

240

00:14:06,160 --> 00:14:10,760

And I was like, holy shit, this is this is the missing piece of the jigsaw puzzle.

241

00:14:10,960 --> 00:14:14,000

Hundred percent, hundred percent.

242

00:14:14,200 --> 00:14:16,640

And now I'm like, how did I not see that earlier?

243

00:14:16,640 --> 00:14:19,000

But there are all sorts of things that I wrong on.

244

00:14:19,200 --> 00:14:21,360

That's one of the things that I'm

245

00:14:21,560 --> 00:14:25,800

that I'm good at doing is admitting when I'm wrong, because I'm wrong quite often.

246

00:14:26,000 --> 00:14:28,080

You and me both.

247

00:14:28,280 --> 00:14:31,760

Sorry is used many, many times in my vocabulary.

248

00:14:31,960 --> 00:14:35,920

Just my my understanding has evolved from when I originally said that.

249

00:14:35,920 --> 00:14:39,400

So, yeah, I bet now I think I want to go back and listen to our first podcast.

250

00:14:39,600 --> 00:14:42,720

I'll probably be like, damn it, Sarah.

251

00:14:42,920 --> 00:14:44,400

It wasn't it wasn't against it.

252

00:14:44,400 --> 00:14:48,680

It was just I don't think that was that, you know, leaping in with both feet element.

253

00:14:48,880 --> 00:14:51,560

Yeah, no, no, definitely not.

254

00:14:51,760 --> 00:14:55,840

But now I'm like, I'm all in on this as a topic.

255

00:14:56,040 --> 00:14:58,840

So well, let's look at the broads, the view first.

256

00:14:59,040 --> 00:15:03,160

Now, you know, we have fire departments in the US that I would argue you have the

257

00:15:03,160 --> 00:15:07,080

gold standard and you could even push if you're talking about elite performance,

258

00:15:07,280 --> 00:15:09,000

even less than 42.

259

00:15:09,000 --> 00:15:12,960

But, you know, 42 puts you in line with the average citizen, the average civilian.

260

00:15:13,160 --> 00:15:16,160

So the 24 72 is big in the northeast.

261

00:15:16,360 --> 00:15:20,600

You know, we've got Boca Raton here in South Florida and now Boynton Beach has

262

00:15:20,800 --> 00:15:25,320

gone to it and then you've got a majority that are working a 56 hour.

263

00:15:25,320 --> 00:15:27,160

They may or may not have a Kelly, you know.

264

00:15:27,360 --> 00:15:31,200

And then with this hiring crisis, now you have mandatory overtime,

265

00:15:31,200 --> 00:15:35,840

which actually I had since my, you know, Genesis into the fire service.

266

00:15:36,040 --> 00:15:39,040

So now you're looking at 80 hours a week on those weeks that they get hit with that.

267

00:15:39,200 --> 00:15:42,360

You got the federal firefighters sort of working 72 hours a week.

268

00:15:42,560 --> 00:15:45,960

You've got wildland firefighters deployed for weeks at a time.

269

00:15:46,160 --> 00:15:51,280

So the overall view, what is your impression once you start understanding

270

00:15:51,480 --> 00:15:54,800

the impact of sleep deprivation on all the things

271

00:15:55,000 --> 00:15:59,760

of the culture of the way we are worked in the fire service at the moment?

272

00:15:59,760 --> 00:16:05,440

I think it's and it's actually it's partly been listening to your podcast,

273

00:16:05,640 --> 00:16:09,280
but I've really been reevaluating some of my own assumptions on

274
00:16:09,480 --> 00:16:11,960
because the challenges and some of the big.

275
00:16:12,160 --> 00:16:13,640
OK, let me step back.

276
00:16:13,760 --> 00:16:17,080
Some of the early research on sleep and the fire service, because FEMA did fund

277
00:16:17,280 --> 00:16:21,360
some research early on around like sleep education and awareness and looking at

278
00:16:21,560 --> 00:16:25,640
sleep disorders and the impact of impact of sleep disorders, which, by the way,

279
00:16:25,840 --> 00:16:28,160
I got to throw this out there.

280
00:16:28,160 --> 00:16:32,160
They are I think it's about more than a third of firefighters have a sleep

281
00:16:32,360 --> 00:16:35,040
disorder, often undiagnosed, so like low hanging fruit.

282
00:16:35,240 --> 00:16:36,400
We need to make sure that everyone's

283
00:16:36,400 --> 00:16:39,840
getting screened for sleep disorders and treating the sleep disorders they have.

284

00:16:40,040 --> 00:16:43,080

So that's a side as a side conversation.

285

00:16:43,280 --> 00:16:45,560

But we need to make sure that people are

286

00:16:45,560 --> 00:16:49,600

doing that because they think that's like the impact of that related to everything

287

00:16:49,800 --> 00:16:53,320

from cardiovascular health and depression, you know, drowsy,

288

00:16:53,520 --> 00:16:56,840

driving, all that kind of stuff. So important.

289

00:16:56,840 --> 00:17:02,160

But, you know, I've always the early research kind of a pushback was that

290

00:17:02,160 --> 00:17:06,560

everyone was afraid people were trying to do away with 24 hour shifts and and the

291

00:17:06,760 --> 00:17:11,200

challenge of moving to if you're not going to do a 24 hour shift, what would you do?

292

00:17:11,400 --> 00:17:16,360

At the end of the day, I think that someone has to be awake at 2 a.m.

293

00:17:16,560 --> 00:17:21,320

or at wake up at 2 a.m. when whatever happens happens.

294

00:17:21,520 --> 00:17:26,000

You know, grandma falls or there's a fire or, you know, someone stubs their toe

295

00:17:26,000 --> 00:17:29,800

and feels the need to wake firefighters up because they have a stub toe.

296

00:17:30,000 --> 00:17:31,320

But

297

00:17:32,240 --> 00:17:39,120

so, you know, I think the inevitability of someone having to be up at night,

298

00:17:39,320 --> 00:17:42,280

we've all just said, well, you know, if you got to be up at night,

299

00:17:42,480 --> 00:17:44,600

you know, we're not going to do away with 24 hour shifts.

300

00:17:44,800 --> 00:17:48,840

But now I see like we're doing now we're going, oh, but let's do a 48 hour shift

301

00:17:49,040 --> 00:17:55,320

or let's do, you know, can you work your 10 days all in a row and then be offered?

302

00:17:55,320 --> 00:17:58,920

So I think that it's really.

303

00:17:59,120 --> 00:18:00,920

Now,

304

00:18:01,120 --> 00:18:04,520

I think all those assumptions are up for grabs.

305

00:18:04,720 --> 00:18:08,120

And especially, you know, especially in the progressive departments,

306

00:18:08,320 --> 00:18:12,080

I just hear so many more conversations now than I did before.

307

00:18:12,280 --> 00:18:16,080

And even beyond, you know, someone has to be up in the middle of the night.

308

00:18:16,280 --> 00:18:19,760

But can you have does everyone in the department have to work the same shift

309

00:18:19,960 --> 00:18:23,200

schedule like maybe that's not the case.

310

00:18:23,200 --> 00:18:27,920

And can you get coverage, can you creatively deploy

311

00:18:28,120 --> 00:18:32,880

or deploy resources and look at where you need resources, when you need resources,

312

00:18:32,880 --> 00:18:35,640

those types of things, L.A. cities doing some changes to theirs.

313

00:18:35,840 --> 00:18:37,480

And it's it does go back to a lot of the

314

00:18:37,480 --> 00:18:41,600

recruitment and retention and the new generation that's coming in and new

315

00:18:41,600 --> 00:18:44,880

parents that don't want to miss, you know, putting their babies to bed at night.

316

00:18:45,080 --> 00:18:49,680

So I think I think people are getting at least the circles I'm in.

317

00:18:49,680 --> 00:18:54,680

People are getting super creative about the way they're looking at shifts

318

00:18:54,880 --> 00:18:56,960

and what we really have to do.

319

00:18:57,160 --> 00:18:59,160

And I think it's just always been sacred.

320

00:18:59,360 --> 00:19:01,480

And so we just never.

321

00:19:02,040 --> 00:19:04,080

Question it before.

322

00:19:04,280 --> 00:19:10,240

So, yeah, the analogy I've used for many years now is when I've seen the

323

00:19:10,440 --> 00:19:17,080

conversations, it's like a Rubik's Cube and people will spin it and go, oh, 48, 96.

324

00:19:17,280 --> 00:19:19,040

And it's now all green instead of blue.

325

00:19:19,040 --> 00:19:22,640

And it's like no one's ever saying, why is the cube so big?

326

00:19:22,840 --> 00:19:23,960

Right. That's the issue.

327

00:19:24,160 --> 00:19:28,000

And so and when people say, oh, we're we're moving to 48, 96.

328

00:19:28,200 --> 00:19:30,520

I'm just like, you know, facepalming so hard.

329

00:19:30,720 --> 00:19:35,320

I mean, you just look at massive step back on the facade that it's going to be better.

330

00:19:35,320 --> 00:19:39,480

And if you look at and we'll get into this in a second, you know, the chronic and acute

331

00:19:39,680 --> 00:19:43,840

effects, let's take the acute for a second, you know, the the improved chances of all

332

00:19:43,840 --> 00:19:47,400

the things going wrong from an intersection wreck to falling off an aerial or getting

333

00:19:47,400 --> 00:19:51,360

lost in a fire, you've just, you know, increased exponentially.

334

00:19:51,560 --> 00:19:52,880

Oh, yeah, yeah.

335

00:19:53,080 --> 00:19:57,400

And I think at first, because I still have people and I just confirmed your

336

00:19:57,600 --> 00:20:01,280

podcast, but I'm like, when I say, you know, what about a 24 72?

337

00:20:01,480 --> 00:20:06,080

Because now anyone that starts bringing up shifts, I say, you know, 24 72 is working

338

00:20:06,280 --> 00:20:10,280

in some places and it's always that's just not possible.

339

00:20:10,280 --> 00:20:12,800

So I think in the past, everyone's just said, all right,

340

00:20:13,000 --> 00:20:15,960

well, instead of even asking a question about the Rubik's Cube, we're just going to

341

00:20:15,960 --> 00:20:19,280

like put it to the side, like, well, we're not even going to look at a smaller Rubik's

342

00:20:19,480 --> 00:20:24,000

Cube. So, you know, this is and you were an early adopter on this idea that maybe

343

00:20:24,200 --> 00:20:29,640

this is maybe we're maybe we're looking at the wrong Rubik's Cube to start with.

344

00:20:29,840 --> 00:20:33,640

Well, I mean, what I've seen is all the way from firefighter through to chiefs

345

00:20:33,640 --> 00:20:37,080

and then city and county administrators, we've all believed fairy tales.

346

00:20:37,080 --> 00:20:38,720

Now, the civilians believe that we sit

347

00:20:38,720 --> 00:20:42,760

around smoking cigars, petting the Dalmatian and waiting for a fire once a week,

348

00:20:42,760 --> 00:20:46,160

even though they they really don't think about the fact that there's nonstop

349

00:20:46,160 --> 00:20:47,960

sirens outside their window all day long.

350

00:20:48,160 --> 00:20:52,040

And then we go around telling people we have the most amazing shift.

351

00:20:52,240 --> 00:20:57,120

And I only work one day on two days off or I work eight, nine days a month,

352

00:20:57,320 --> 00:21:01,080

which is absolute bullshit because a day for most people,

353

00:21:01,080 --> 00:21:04,000

if we're using standardized is a nine hour day with a one hour lunch.

354

00:21:04,200 --> 00:21:05,320

That's eight hours of work.

355

00:21:05,520 --> 00:21:09,440

We work three days crammed together and then have one day off because that second

356

00:21:09,640 --> 00:21:11,320

day we work from midnight to eight a.m.

357

00:21:11,320 --> 00:21:15,480

So it's one day. So it's three days on one day off or 30 days a month.

358

00:21:15,680 --> 00:21:16,880

So this is the thing.

359

00:21:17,080 --> 00:21:20,840

While we believe our own lives, we're going to move the cube to the side.

360

00:21:21,040 --> 00:21:25,080

What we need to people to do is say, wait a second, why does everyone else work

361

00:21:25,280 --> 00:21:29,080

40 hours, but you asked me to wake up from a dead sleep, slide down a pole,

362

00:21:29,280 --> 00:21:33,720

get in the back of a tiller truck, navigate to the fire without killing someone,

363

00:21:33,920 --> 00:21:36,600

make entry, find the child, pull them out, doff my gear.

364

00:21:36,600 --> 00:21:43,440

We can now do a pediatric cardiac algorithm on 56 hour workweek or eight hour workweek.

365

00:21:43,640 --> 00:21:47,680

That's what we've got to think about to debunk it because, oh, well, never happens.

366

00:21:47,880 --> 00:21:49,440

Like, well, you don't think your family

367

00:21:49,640 --> 00:21:53,880

deserves to have you home as much, if not more, as a person that works

368

00:21:54,080 --> 00:21:56,760

in the bank or the grocery store, I disagree.

369

00:21:56,960 --> 00:22:00,400

Yeah, yeah, I just think it's

370

00:22:00,600 --> 00:22:03,080

I and honestly, I think some of the fear

371

00:22:03,080 --> 00:22:08,240

of getting rid of a 24 hour shift has driven just a dead stop to the shift

372

00:22:08,240 --> 00:22:11,200

conversation at all. And I think that's what's starting to change.

373

00:22:11,400 --> 00:22:15,560

It's like, all right, so if we're going to, you know, let's let's evaluate shifts.

374

00:22:15,560 --> 00:22:16,760

Let's start talking about it.

375

00:22:16,960 --> 00:22:19,760

Let's and then what are the variations?

376

00:22:19,960 --> 00:22:27,440

So I think it's I think it's a good I'm optimistic, although I've been told that I'm

377

00:22:28,280 --> 00:22:30,160

what Rhonda Kelly uses the term apoc.

378

00:22:30,160 --> 00:22:33,960

I'm an apoc optimist that you like, no matter how much everything's going to shit,

379

00:22:33,960 --> 00:22:35,160

you're going to just be positive.

380

00:22:35,360 --> 00:22:38,040

It's going to end up end up well.

381

00:22:38,240 --> 00:22:43,240

So I always have to be positive that like this is a we're headed in the right direction.

382

00:22:43,440 --> 00:22:48,320

When it makes sense, it gives me the anger and energy to keep pushing forward.

383

00:22:48,520 --> 00:22:52,120

It's simple, you know, when you know that eventually there's going to be an aha

384

00:22:52,120 --> 00:22:53,720

moment, that's what spurs me on.

385

00:22:53,920 --> 00:22:55,440

I call myself an angry optimist.

386

00:22:55,640 --> 00:22:59,120

I'm not all hearts and rainbows all the time, but, you know,

387

00:22:59,120 --> 00:23:00,680

it's going to get better whether it means

388

00:23:00,680 --> 00:23:04,560

dipping my knuckles in glass and punching my way through or, you know,

389

00:23:04,760 --> 00:23:08,400

lifting everyone up with poetry as long as the end game is the same.

390

00:23:08,600 --> 00:23:10,400

Well, and I'll just feed the data out so

391

00:23:10,400 --> 00:23:12,880

then you can I mean, it'll all work out beautifully.

392

00:23:13,080 --> 00:23:14,720

It'll all work out beautifully.

393

00:23:14,920 --> 00:23:18,880

But no, I think that it is.

394

00:23:19,080 --> 00:23:23,720

I do think that this is the missing piece, and we're doing what we can to collect data

395

00:23:23,720 --> 00:23:29,720

on it so we can say like, here's the you know, here is the impact.

396

00:23:29,720 --> 00:23:31,400

Here's the quantifiable impact.

397

00:23:31,440 --> 00:23:35,440

Because like you said in some of your other podcasts, like you got to make the case for it.

398

00:23:35,640 --> 00:23:38,800

So if you can make the case to city,

399

00:23:38,800 --> 00:23:40,880

county, you know, that you're going to have these improved outcomes.

400

00:23:41,080 --> 00:23:45,280

And it is, you know, it is a return of investment question.

401

00:23:45,480 --> 00:23:50,520

You know, it is an upfront cost that is significant compared.

402

00:23:50,720 --> 00:23:51,920

But in the long run, you know,

403

00:23:51,920 --> 00:23:56,640

you're playing the long game with this, but any elected officials playing the

404

00:23:56,640 --> 00:23:59,240

short game, you're playing till the end of their elected term.

405

00:23:59,440 --> 00:24:01,520

So, yeah, exactly.

406

00:24:01,720 --> 00:24:03,600

Well, I think that's that's the point.

407

00:24:03,800 --> 00:24:06,200

I mean, you and I and I'm sure a lot of people listening,

408

00:24:06,400 --> 00:24:10,200

if we were burying our friends, that would be enough to force change.

409

00:24:10,400 --> 00:24:13,320

But sadly, that's not the case in many, many places.

410

00:24:13,520 --> 00:24:17,320

So the money side is the big thing now.

411

00:24:17,520 --> 00:24:19,200

Again, that doesn't seem to be data and I'll

412

00:24:19,200 --> 00:24:21,920

definitely kind of get you to expand if there is.

413

00:24:22,120 --> 00:24:26,280

But what I've seen is where you can identify an obvious, you know,

414

00:24:26,480 --> 00:24:31,080

bleeding of finances on the back end is all anything related to health.

415

00:24:31,080 --> 00:24:33,920

You know, you work with comp claims, you're over time covering vacancies,

416

00:24:33,920 --> 00:24:35,280
you know, all the things, your medical

417
00:24:35,280 --> 00:24:38,600
retirements and then the lawsuits from mistakes that we make because we're so

418
00:24:38,800 --> 00:24:40,920
tired. So the money is there.

419
00:24:41,120 --> 00:24:46,520
But let's let's unpack the impact of sleep deprivation shift work on the

420
00:24:46,520 --> 00:24:49,200
individual's health, mental health, physical health.

421
00:24:49,400 --> 00:24:51,280
And then at the end, we can kind of revisit

422
00:24:51,480 --> 00:24:55,160
the immense savings that cities and counties would find if they if they fix

423
00:24:55,360 --> 00:24:59,120
that problem. So where to begin?

424
00:24:59,240 --> 00:25:01,200
Yeah, exactly. Let you look at my list like, OK,

425
00:25:01,400 --> 00:25:05,680
let's jump in on the acute impact of sleep deprivation on cognition first.

426
00:25:05,880 --> 00:25:09,000
So now we're addressing accidents and line of duty deaths,

427

00:25:09,200 --> 00:25:13,360

I would argue, from the, you know, the getting lost in the fire type incidents.

428

00:25:13,360 --> 00:25:18,640

So so what have you kind of learned about the impact of sleep deprivation?

429

00:25:18,840 --> 00:25:21,880

And I know a lot of studies would be that, oh, well, one night, Matthew Walker,

430

00:25:21,880 --> 00:25:23,880

one night without sleep is a blood alcohol.

431

00:25:23,880 --> 00:25:26,080

Yeah. Well, let's talk about 10 years

432

00:25:26,080 --> 00:25:30,200

of that, because we're not when these aren't college students volunteering for a 12 day

433

00:25:30,400 --> 00:25:35,560

study. Right. Well, and I do love Matthew Walker and I do love all of his work on

434

00:25:35,760 --> 00:25:39,560

his why we sleep like game changer.

435

00:25:39,560 --> 00:25:41,760

And I think game changer because I used

436

00:25:41,760 --> 00:25:44,560

to say it scared me into sleeping better, but I think it really gave me permission

437

00:25:44,760 --> 00:25:48,120

to prioritize sleep like before I felt lazy if I was getting eight hours,

438

00:25:48,120 --> 00:25:49,480
eight hours to sleep at night.

439
00:25:49,680 --> 00:25:51,880
And now I'm like, I'm optimizing my health.

440
00:25:52,080 --> 00:25:57,280
Like I'm doing this to be just a better person, to be healthier, to be happier.

441
00:25:57,480 --> 00:26:02,680
So so I do think that immediate, even if you look at well back to the work by Laura

442
00:26:02,880 --> 00:26:07,880
Barger and the and Sizer's group at

443
00:26:08,080 --> 00:26:11,200
the challenges with for firefighters with sleep disorders,

444
00:26:11,200 --> 00:26:16,160
like the numbers there, I think I have them in a I have some of my numbers

445
00:26:16,160 --> 00:26:19,040
in the background because I usually just give you the not throw out numbers.

446
00:26:19,040 --> 00:26:22,120
But I'm like, I don't know if that's actually the number or if I just made that up.

447
00:26:22,320 --> 00:26:23,600
So I did make sure I had this.

448
00:26:23,800 --> 00:26:28,120
So she looked at this firefighters with sleep disorders versus not 37.

449

00:26:28,120 --> 00:26:29,440

I was right. More than a third.

450

00:26:29,640 --> 00:26:32,480

Thirty seven percent screen positive for sleep disorder.

451

00:26:32,680 --> 00:26:35,280

Twice as likely to motor vehicle crash.

452

00:26:35,480 --> 00:26:38,200

So if you think about like even

453

00:26:38,200 --> 00:26:42,400

the risk of driving to work drowsy or driving home from work drowsy,

454

00:26:42,400 --> 00:26:45,040

because I also want to talk about changing shift start times,

455

00:26:45,240 --> 00:26:48,680

because that's what another piece that I think is important.

456

00:26:48,880 --> 00:26:51,080

But more than twice as likely

457

00:26:51,280 --> 00:26:55,800

that the odds ratio two point four one to report falling asleep while driving.

458

00:26:55,920 --> 00:26:57,360

Like that's incredibly dangerous,

459

00:26:57,360 --> 00:26:59,280

dangerous, especially if you're driving a fire truck.

460

00:26:59,480 --> 00:27:03,680

Imagine that on a second day of a 48 hour shift.

461

00:27:03,880 --> 00:27:07,320

But also it was related to cardiovascular disease, double the risk of cardiovascular

462

00:27:07,320 --> 00:27:09,760

disease, similar for diabetes.

463

00:27:09,960 --> 00:27:14,400

And then the piece you talk about cognition and the relationship with things like

464

00:27:14,600 --> 00:27:18,920

mental health, depression, three times the risk of depression and anxiety.

465

00:27:18,920 --> 00:27:20,440

It was almost four times the risk.

466

00:27:20,640 --> 00:27:22,280

So like those are huge.

467

00:27:22,280 --> 00:27:24,600

And if you think of that just being the interrupted,

468

00:27:24,800 --> 00:27:27,760

you know, the interrupted sleep due to the sleep disorders, I mean, I think that's

469

00:27:27,960 --> 00:27:32,760

a close approximation, but that's among firefighters who are already struggling

470

00:27:32,960 --> 00:27:36,520

with sleep disruption and interruptive circadian rhythm,

471

00:27:36,520 --> 00:27:41,640

which, by the way, World Health Organization classified shift work as a probable

472

00:27:41,840 --> 00:27:45,840

carcinogen, like just that.

473

00:27:46,040 --> 00:27:48,120

In and of itself has the scientific

474

00:27:48,320 --> 00:27:51,320

evidence that that it could be classified as a probable carcinogen.

475

00:27:51,520 --> 00:27:54,240

Like that's huge.

476

00:27:54,440 --> 00:27:55,720

That's huge.

477

00:27:55,920 --> 00:27:59,080

Absolutely. Well, with that, then, as far as cognition,

478

00:27:59,280 --> 00:28:03,120

like I forget who it was now, one of the the guests I had on was talking about

479

00:28:03,120 --> 00:28:07,760

microsleeps and how they done a study, I think it was on law enforcement,

480

00:28:07,760 --> 00:28:10,920

you know, and the number of times that they basically blasted through a red light.

481

00:28:11,120 --> 00:28:12,840

Now, hopefully they made it the other side.

482

00:28:13,040 --> 00:28:16,680

But, you know, the tabloids are full of intersection wrecks.

483

00:28:16,880 --> 00:28:19,080

So talk to me about that.

484

00:28:19,280 --> 00:28:21,360

Microsleeps.

485

00:28:21,640 --> 00:28:28,840

Oh, and it's about like long blink that you feel like I like I'm just long blinking.

486

00:28:28,840 --> 00:28:33,040

No, you're not. Your body is actually paralyzed for like two seconds.

487

00:28:33,240 --> 00:28:36,280

And it is your body trying to capture

488

00:28:36,480 --> 00:28:39,240

what it needs in that two seconds of sleep that it's getting.

489

00:28:39,440 --> 00:28:43,200

So you're like you basically your body is basically paralyzed.

490

00:28:43,280 --> 00:28:47,440

Right. So there was a study and this is not me advocating for drunk driving.

491

00:28:47,640 --> 00:28:52,520

But when you look at drunk driving compared to sleepy driving or drowsy

492

00:28:52,520 --> 00:28:55,360

driving, like it doesn't seem like that big, but you're like, oh, you're just a

493

00:28:55,360 --> 00:29:00,240

little bit tired on the road. No, drunk drivers see what's coming.

494

00:29:00,240 --> 00:29:01,400

And they sort of to not hit it.

495

00:29:01,600 --> 00:29:06,240

But when they studied accidents, they actually found that drowsy driving was

496

00:29:06,440 --> 00:29:08,680

even worse because you're hitting stuff head on.

497

00:29:08,880 --> 00:29:12,720

Like you do that long blink, which we call it a long blink, but it's actually

498

00:29:12,920 --> 00:29:15,320

sleeping, paralyzing your body for two seconds.

499

00:29:15,520 --> 00:29:18,640

And then by the time you open your eyes, it's too late to swerve.

500

00:29:18,840 --> 00:29:22,360

So in a lot of ways, if you look at like how dangerous or deadly they are,

501

00:29:22,360 --> 00:29:25,840

drowsy driving is more like don't drink and drive.

502

00:29:26,040 --> 00:29:30,080

Don't be a drunk driver, but also don't be like it's that serious.

503

00:29:30,280 --> 00:29:33,880

And it's you wouldn't you wouldn't be like, well, it's OK if people are going

504

00:29:34,080 --> 00:29:39,200
home drunk from the fire station, but we are basically putting them and

505
00:29:39,400 --> 00:29:43,040
sending them out of the firehouse.

506
00:29:44,000 --> 00:29:47,960
Cognitively intoxicated driving home sometimes.

507
00:29:48,160 --> 00:29:50,080
And that's one of the things is the

508
00:29:50,080 --> 00:29:55,080
particularly early shift change times and then driving home drowsy.

509
00:29:55,280 --> 00:29:57,160
And most people are driving, you know,

510
00:29:57,360 --> 00:30:01,320
most of the departments I've been talking to about their shifts and

511
00:30:01,520 --> 00:30:05,600
particularly with the start times, like about half their department lives

512
00:30:05,800 --> 00:30:08,760
between 30 minutes and an hour away from the station.

513
00:30:08,960 --> 00:30:11,600
Some places it's way more than that.

514
00:30:11,800 --> 00:30:13,760
But that's it. That's not a small.

515

00:30:13,960 --> 00:30:16,440

That's not a small amount of time or a small issue.

516

00:30:16,440 --> 00:30:20,040

No, mine was 75 minutes most of my career each way.

517

00:30:20,240 --> 00:30:24,000

Crazy. And what and what time did you change shifts?

518

00:30:24,200 --> 00:30:25,720

So well, here's the thing.

519

00:30:25,720 --> 00:30:29,360

So you have when you're supposed to change shifts, which that's when the turds will

520

00:30:29,560 --> 00:30:33,840

show up, you know, but the good firefighters will usually get there 30 minutes or so

521

00:30:34,040 --> 00:30:37,960

prior to make sure that their brother or sister has just been in the meat grinder

522

00:30:38,160 --> 00:30:41,760

for 24 hours or more, doesn't catch another late call.

523

00:30:41,960 --> 00:30:44,280

So you're looking at, you know, like I was

524

00:30:44,280 --> 00:30:46,800

getting there around seven just after seven.

525

00:30:47,000 --> 00:30:49,680

And so, I mean, I was getting up about five in the morning.

526

00:30:49,880 --> 00:30:52,480

Yeah, yep.

527

00:30:52,680 --> 00:30:55,880

We did a study, one of the studies we did with Joel.

528

00:30:56,080 --> 00:30:59,360

We were looking at 24 48 versus 48 96.

529

00:30:59,560 --> 00:31:02,800

And the thought was, oh, we're looking at the differences in the.

530

00:31:03,000 --> 00:31:05,360

And these were not very busy departments,

531

00:31:05,560 --> 00:31:08,880

but we thought we were looking at the differences in the two like schedule

532

00:31:08,880 --> 00:31:15,480

structures, but the big like, oh, my God, take home was how short slept.

533

00:31:15,680 --> 00:31:19,360

People are coming to work and leaving work like five point six and five point eight

534

00:31:19,560 --> 00:31:23,880

hours and under six hours, I mean, even under seven hours, but under six hours is

535

00:31:24,080 --> 00:31:31,960

where you see everything going to shit from reproductive health to inflammation,

536

00:31:32,160 --> 00:31:36,280

to mental like, you know, that after

537

00:31:36,280 --> 00:31:41,480

if you're sleeping that little, you're it's 100 percent affecting your health.

538

00:31:41,680 --> 00:31:44,960

Testosterone production, all of it, all of it.

539

00:31:44,960 --> 00:31:48,360

And most firefighters in that study, on average, were coming to sleep,

540

00:31:48,560 --> 00:31:52,360

coming to work short slept and leaving short slept often because of a seven AM

541

00:31:52,360 --> 00:31:54,840

shift change time. That's one of the studies that we're

542

00:31:54,840 --> 00:31:58,920

proposing is to look at departments that are changing that to later and see, do

543

00:31:59,120 --> 00:32:03,640

people, you know, do they just stay up later or can you actually get people to

544

00:32:03,640 --> 00:32:06,360

get more sleep and have better health outcomes?

545

00:32:06,560 --> 00:32:10,160

See, and I like that conversation as long as it's not the only conversation.

546

00:32:10,240 --> 00:32:12,560

People like, oh, we're going to revolutionize our fire department.

547

00:32:12,560 --> 00:32:14,560

We're going to come in at seven PM.

548

00:32:14,760 --> 00:32:17,920

OK, well, have you had the conversation about the whole 56 hour thing?

549

00:32:18,120 --> 00:32:19,680

No, no, no, we're just going to.

550

00:32:19,880 --> 00:32:21,720

OK, well, again, prioritize.

551

00:32:21,920 --> 00:32:28,120

But if you imagine you did a 24 72 and you decided for zero cost to come in,

552

00:32:28,120 --> 00:32:31,480

I mean, I would say like midday that way, most people get to have breakfast

553

00:32:31,480 --> 00:32:34,160

with their kids before they go to school and their and their spouse.

554

00:32:34,360 --> 00:32:38,200

And then, you know, the rush hour traffic has died down by that point.

555

00:32:38,200 --> 00:32:40,120

And then you you know, you get in and

556

00:32:40,320 --> 00:32:45,720

the on the crew didn't have to be woken up at seven AM by dispatch, which I don't

557

00:32:45,920 --> 00:32:50,120

understand that to this day lights come on so they can if they've had a rough night

558

00:32:50,120 --> 00:32:52,960

that I'm sleep till nine or 10, they know that rigs checked out.

559

00:32:52,960 --> 00:32:54,280

They were just in it, you know.

560

00:32:54,480 --> 00:32:58,120

So, yeah, I mean, that side makes a lot of sense to me as well.

561

00:32:58,320 --> 00:33:01,400

Yeah, no, I think I mean, imagine if you

562

00:33:01,400 --> 00:33:06,960

could do both and that would that would I mean, I think changing a shift start time

563

00:33:07,160 --> 00:33:11,000

is I think the benefit of doing that for a department that's not willing to talk

564

00:33:11,200 --> 00:33:16,600

24 72 is it teaches them that like this is not a sacred cow that can't be touched.

565

00:33:16,800 --> 00:33:19,120

Like we can we have control over this.

566

00:33:19,320 --> 00:33:21,400

We can do this.

567

00:33:21,600 --> 00:33:24,920

And then I think you can move them into the

568

00:33:25,120 --> 00:33:29,480

the 24 72 because if you have that, you know, here's here's how things improved

569

00:33:29,480 --> 00:33:31,360

and we can improve it even more.

570

00:33:31,560 --> 00:33:34,280
I just think it's I just think it's been

571
00:33:34,480 --> 00:33:38,160
everyone, including myself, has been hesitant to.

572
00:33:38,360 --> 00:33:40,320
Say.

573
00:33:40,520 --> 00:33:43,040
To even talk about shit, you know, it was

574
00:33:43,240 --> 00:33:46,760
10 years ago, 15 years ago, the conversation just shut down.

575
00:33:46,960 --> 00:33:47,880
Mm hmm.

576
00:33:48,080 --> 00:33:49,560
I know.

577
00:33:49,760 --> 00:33:53,760
Yeah, I mean, we're just not going to we're not going to talk about that.

578
00:33:53,960 --> 00:33:57,160
Yeah, we're just layering on to the

579
00:33:57,160 --> 00:34:00,880
the acute side before we go to the chronic disease side.

580
00:34:01,080 --> 00:34:03,720
Matthew Walker states in a blood alcohol

581

00:34:03,920 --> 00:34:07,000

point one, basically, which is over the legal limit.

582

00:34:07,200 --> 00:34:12,040

But that arguably is probably a bunch of college students that were asked to, you

583

00:34:12,240 --> 00:34:16,400

know, to not sleep for 24 hours once, you know, and then go back to probably sleeping

584

00:34:16,400 --> 00:34:17,800

in their own bed every night.

585

00:34:18,000 --> 00:34:22,360

In our profession, you've got these people doing it every third day for 10, 20, 30 years.

586

00:34:22,560 --> 00:34:24,520

Have you seen any kind of studies or is

587

00:34:24,520 --> 00:34:29,640

there an understanding how far from that point one our first responders probably

588

00:34:29,840 --> 00:34:33,520

are? You know, I mean, the cognition is, like you said, terrifying at that point.

589

00:34:33,720 --> 00:34:38,760

But if you amplify it by times X, then, you know, I can imagine we're even

590

00:34:38,760 --> 00:34:41,320

further into the hole than most people think we are.

591

00:34:41,520 --> 00:34:42,960

Yeah. You know, it's a good question.

592

00:34:43,160 --> 00:34:45,960
I've never I've not seen that quantified.

593
00:34:45,960 --> 00:34:47,320
I'm going to make a note, though, and I'm

594
00:34:47,320 --> 00:34:49,480
going to look it up and confirm that I'm right about that.

595
00:34:49,680 --> 00:34:50,760
But

596
00:34:50,960 --> 00:34:53,200
it's a great study to be done.

597
00:34:53,200 --> 00:34:57,920
You know, I think that I think it's a great study to be done because you could

598
00:34:57,920 --> 00:34:59,360
look at it in a couple of different ways.

599
00:34:59,560 --> 00:35:01,880
You know, people who are.

600
00:35:02,080 --> 00:35:04,760
Well, we don't have to design a study right now, but there are a lot of different

601
00:35:04,960 --> 00:35:07,600
ways that you can look at it to quantify that.

602
00:35:07,800 --> 00:35:10,280
Yeah, I think it's just important because it's cumulative.

603

00:35:10,280 --> 00:35:11,560
And we know that in the sleep medicine

604
00:35:11,760 --> 00:35:13,560
world, that sleep debt is a real thing.

605
00:35:13,760 --> 00:35:18,680
So if, you know, like you said, your actual shift, even if you don't get woken up,

606
00:35:18,880 --> 00:35:22,400
you know, we're having that kind of half one eye open, half sleep.

607
00:35:22,400 --> 00:35:24,160
So it's not a deep restorative sleep.

608
00:35:24,360 --> 00:35:27,680
I would argue the same as probably the night before, because I was always anxious

609
00:35:27,680 --> 00:35:29,560
to get up and not missing my alarm.

610
00:35:29,760 --> 00:35:31,960
And then that middle day, which is on us,

611
00:35:32,160 --> 00:35:35,880
ownership part, if we've been drinking that night, then we've disrupted our sleep

612
00:35:36,080 --> 00:35:40,120
that night, too. So, you know, you've just got this slow decline over time.

613
00:35:40,320 --> 00:35:41,160
Which is another one.

614

00:35:41,360 --> 00:35:45,600

I think that it's under recognized how much alcohol impacts sleep.

615

00:35:45,800 --> 00:35:50,040

And we know, you know, alcohol use in the fire service relatively high.

616

00:35:50,040 --> 00:35:55,000

And you think like, oh, I'm going to have a drink to relax and go to sleep or to

617

00:35:55,200 --> 00:35:57,840

drink excess drink to excess and pass out.

618

00:35:58,040 --> 00:36:00,120

We are actually interrupting all those rhythms.

619

00:36:00,320 --> 00:36:03,760

And you will be waking up overnight without remembering it.

620

00:36:03,960 --> 00:36:05,360

So you think, oh, I slept all night.

621

00:36:05,560 --> 00:36:07,720

And it was actually didn't you.

622

00:36:07,920 --> 00:36:11,920

You woke up all night long, but you don't remember it because of the alcohol.

623

00:36:12,120 --> 00:36:13,080

Not interesting.

624

00:36:13,280 --> 00:36:14,680

It is. Well, I mean, it's funny because

625

00:36:14,880 --> 00:36:18,840
the sleep medicine world's metric is how tired are you?

626
00:36:18,840 --> 00:36:20,480
That's the thing that they study.

627
00:36:20,480 --> 00:36:23,320
So, you know, a number of times you think about you drank.

628
00:36:23,520 --> 00:36:25,200
You always feel terrible the next day.

629
00:36:25,240 --> 00:36:29,360
And actually, Kurt Parsley said that what alcohol does is show your fatigue beneath,

630
00:36:29,560 --> 00:36:31,040
you know, beneath, basically.

631
00:36:31,240 --> 00:36:33,960
So when you're tired with alcohol, it's because you're tired.

632
00:36:34,160 --> 00:36:35,240
You're actually tired.

633
00:36:35,440 --> 00:36:41,680
So I was talking to one guy who a firefighter from.

634
00:36:41,880 --> 00:36:44,600
I think I was talking to him in Arizona, but I don't think that's where he was

635
00:36:44,800 --> 00:36:47,640
from, and he did like a self study, so he did.

636

00:36:47,640 --> 00:36:52,360

I can't remember if he used loop or an or a ring, but he like altered his alcohol.

637

00:36:52,560 --> 00:36:55,320

This is the kind of I think this is the kind

638

00:36:55,320 --> 00:36:58,160

of research we can get firefighters really involved in

639

00:36:58,360 --> 00:37:02,400

purposely drinking at different times and different amounts to see what happens.

640

00:37:02,600 --> 00:37:05,880

And he said even with one drink, he had

641

00:37:06,080 --> 00:37:11,280

poor sleep, like objectively measured poor sleep at night from from one drink.

642

00:37:11,480 --> 00:37:13,400

And if you think about on average when

643

00:37:13,400 --> 00:37:18,040

firefighters drinking or drinking three point five of whatever it is,

644

00:37:18,240 --> 00:37:20,560

servings of alcohol,

645

00:37:21,960 --> 00:37:26,120

that's you know, that's a significant impact as well, I think.

646

00:37:26,320 --> 00:37:30,520

Yeah. I mean, if you think about it, it's a toxin and your body's needing energy

647

00:37:30,720 --> 00:37:34,400

and blood flow to remove that toxin because you just poisoned yourself.

648

00:37:34,400 --> 00:37:36,960

And don't get me wrong, this is Cambodia, by the way, not beer that I'm drinking.

649

00:37:36,960 --> 00:37:41,400

But as we're having this conversation, there is alcohol in it, though, a little bit.

650

00:37:41,400 --> 00:37:45,160

But, you know, but it is its self sabotage,

651

00:37:45,360 --> 00:37:48,840

which is the T-shirt I made this recently, self care and sabotage.

652

00:37:49,040 --> 00:37:50,840

It's exactly what it is.

653

00:37:51,040 --> 00:37:52,440

But yeah, so when you think about it

654

00:37:52,440 --> 00:37:55,680

with the kind of common sense lens, of course, your sleep's disrupted

655

00:37:55,880 --> 00:37:58,360

because the body wants to not be digesting something.

656

00:37:58,560 --> 00:38:00,600

You shove down your cake hole at 10 p.m.

657

00:38:00,800 --> 00:38:03,160

and not be metabolizing the sugars and alcohol.

658

00:38:03,360 --> 00:38:05,720
It just wants to rest and repair.

659
00:38:05,920 --> 00:38:07,960
So, you know, it does make perfect sense.

660
00:38:07,960 --> 00:38:08,840
Let me take a step back.

661
00:38:08,840 --> 00:38:11,760
It's kind of irrefutable that if you poison yourself, yes, your body's

662
00:38:11,760 --> 00:38:13,320
going to have to focus on that.

663
00:38:13,520 --> 00:38:17,720
Well, when you say it that way, it seems very obvious.

664
00:38:18,040 --> 00:38:20,560
But I also think, you know, what we see with the alcohol use,

665
00:38:20,760 --> 00:38:25,320
and this goes back to the big, you know, your your big picture

666
00:38:25,520 --> 00:38:31,440
comment about it's also interrelated, like we know that alcohol use is often used

667
00:38:31,640 --> 00:38:37,240
as a coping mechanism, you know, it's how you manage all the other stressors.

668
00:38:37,240 --> 00:38:40,680
And I also think so I and I don't have data to back this up.

669

00:38:40,880 --> 00:38:44,160

So I could be lying and I could write this as a hypothesis.

670

00:38:44,360 --> 00:38:46,160

I guess is what we should call it.

671

00:38:46,360 --> 00:38:48,640

Not that I'm lying.

672

00:38:48,840 --> 00:38:50,720

I think that another

673

00:38:50,920 --> 00:38:55,920

another sleep piece and tying it to the mental health is if you look at the way

674

00:38:56,120 --> 00:38:59,520

sleep is structured and how you remember and how you forget,

675

00:38:59,720 --> 00:39:03,440

I think that part of what might be driving some of these mental health issues,

676

00:39:03,440 --> 00:39:07,960

particularly symptoms of post-traumatic stress with like the intrusion,

677

00:39:08,000 --> 00:39:10,000

the intrusive thoughts, those types of things.

678

00:39:10,200 --> 00:39:11,640

I think it could be because of that

679

00:39:11,840 --> 00:39:15,200

interrupted sleep, because you're you know, instead of taking things

680

00:39:15,400 --> 00:39:19,240

from short term memory to long term memory and weeding out the neural

681

00:39:19,440 --> 00:39:22,160

connections of a wait, no, you can pack this away.

682

00:39:22,360 --> 00:39:24,080

You don't you don't need this piece.

683

00:39:24,280 --> 00:39:26,440

I think that's getting.

684

00:39:26,640 --> 00:39:28,880

I think that's getting screwed up.

685

00:39:29,080 --> 00:39:29,760

It certainly is.

686

00:39:29,760 --> 00:39:31,360

I know the sleep medicine world has

687

00:39:31,360 --> 00:39:34,480

shown that for all different areas of mental health.

688

00:39:34,480 --> 00:39:36,560

But that's when you process memories,

689

00:39:36,560 --> 00:39:39,680

that's when you discard things that were useless, everyone that you passed

690

00:39:39,680 --> 00:39:41,600

in your car that you don't need to remember.

691

00:39:41,800 --> 00:39:44,600

But it's also when you process some of those traumas.

692

00:39:44,800 --> 00:39:49,160

And then if you think about you're not sleeping well any of those three days,

693

00:39:49,360 --> 00:39:51,640

then you're slowly kind of, you know,

694

00:39:51,840 --> 00:39:54,720

your brain is getting more and more full and more overwhelmed.

695

00:39:54,720 --> 00:39:58,080

And I think physiologically, the brain literally takes a bath at night.

696

00:39:58,120 --> 00:39:59,640

And that's kind of when a lot of this happens.

697

00:39:59,640 --> 00:40:04,560

So you're regenerating neurons, you're processing the drills that you did the day

698

00:40:04,760 --> 00:40:09,080

before so that you can actually be better at that skill the next day.

699

00:40:09,280 --> 00:40:10,560

Sleep is imperative for that.

700

00:40:10,560 --> 00:40:13,600

And we're taking it away and it's not able to do a lot of those things.

701

00:40:13,600 --> 00:40:14,880

So there's there's no question.

702

00:40:14,880 --> 00:40:18,520

I mean, your hypothesis is right because the sleep medicine world has shown it.

703

00:40:18,720 --> 00:40:21,680

Well, if you think about so what we're seeing, like with post traumatic stress

704

00:40:21,680 --> 00:40:25,520

disorder, we're doing a study on that right now, which, by the way, if you know

705

00:40:25,520 --> 00:40:28,200

anyone who's struggling with post traumatic stress and nightmares, we're

706

00:40:28,200 --> 00:40:30,480

trying an abbreviated intervention for it.

707

00:40:30,680 --> 00:40:35,760

So it's a four day basically workshop on how to retrain your brain on these things.

708

00:40:35,960 --> 00:40:40,080

And that's when we look at we've been doing a lot of assessments of people's

709

00:40:40,280 --> 00:40:45,280

symptoms and when you look at like a standard PTSD, it's a flashback to a very

710

00:40:45,280 --> 00:40:49,440

specific incident, you know, and the definition of PTSD was basically derived

711

00:40:49,640 --> 00:40:52,480

out of military experience and often unemployment.

712

00:40:52,680 --> 00:40:55,760

But they tend to be like very discreet experiences.

713

00:40:55,760 --> 00:40:59,720

And when we ask when we talk to firefighters about their experience and that

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00:40:59,920 --> 00:41:04,160

repeated exposure to trauma, it's not necessarily one or two things.

715

00:41:04,360 --> 00:41:06,400

It's like flashbacks to multiple things.

716

00:41:06,600 --> 00:41:07,880

That's thousand cuts.

717

00:41:08,080 --> 00:41:11,040

Yeah. When it's one firefighter was saying, you know,

718

00:41:11,240 --> 00:41:15,000

I was in a really interesting conversation between two guys in one of my classes,

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00:41:15,000 --> 00:41:17,720

one I'd known for a long time who struggled with some post traumatic stress

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00:41:17,920 --> 00:41:19,360

and another one who was new on the job.

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00:41:19,360 --> 00:41:20,440

And he's like, I don't get it.

722

00:41:20,640 --> 00:41:22,120

Like, it just doesn't bother me.

723

00:41:22,120 --> 00:41:25,880

I know people talk about all this, you know, and he was like a year on.

724

00:41:26,080 --> 00:41:30,600

So and the other guy goes, you know, it scares me to hear you say that because

725

00:41:30,600 --> 00:41:32,120

you think it's never going to bother you.

726

00:41:32,120 --> 00:41:36,320

He goes. And then one day you're sitting at breakfast and you take a bite of cereal,

727

00:41:36,520 --> 00:41:40,120

look up and see that, you know, look at your daughter and you see the face of a

728

00:41:40,320 --> 00:41:44,120

girl that died 10 years ago that you dug out of a ditch.

729

00:41:44,320 --> 00:41:47,160

And it's like how much of that memory

730

00:41:47,160 --> 00:41:52,320

popping back in or that visual popping back in is because that memory, that call

731

00:41:52,520 --> 00:41:56,760

was not properly processed that night during sleep.

732

00:41:56,960 --> 00:41:57,360

Yeah.

733

00:41:57,360 --> 00:42:01,400

You know, and I know we can't get that specific with the science, but if you look

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00:42:01,600 --> 00:42:05,800

at what we what is working with treatments for things like post traumatic stress,

735

00:42:06,000 --> 00:42:09,800

it's basically retraining the neural connections in your brain, you know,

736

00:42:10,000 --> 00:42:13,720

reprocessing things and appropriately putting things where they need to be.

737

00:42:13,920 --> 00:42:15,800

And I'm just wondering how much of that is

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00:42:15,800 --> 00:42:19,040

because it didn't get packaged away where it was supposed to.

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00:42:19,240 --> 00:42:20,400

After the call,

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00:42:20,600 --> 00:42:25,480

yeah, what an equal and opposite, you've got the slow breakdown over those 10

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00:42:25,680 --> 00:42:29,920

years since that call, so if you had that call and then,

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00:42:30,120 --> 00:42:33,800

you know, being in a healthy shift system where you slept well and you got to

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00:42:33,800 --> 00:42:37,360

process it, you probably never would have had that flashback in the first place.

744

00:42:37,560 --> 00:42:40,880

The 10 years of not sleeping and the cycle that we just described,

745

00:42:41,080 --> 00:42:45,080

your resilience, your ability to enough for your brain to try and process that

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00:42:45,080 --> 00:42:48,960

or not, you know, let the barrel explode in your mind.

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00:42:49,160 --> 00:42:54,560

You know, your your equal and opposite ability to do that is being destroyed slowly.

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00:42:54,760 --> 00:42:55,920

Right.

749

00:42:56,120 --> 00:42:57,280

Yeah.

750

00:42:57,480 --> 00:42:58,960

That's why I think it's all related.

751

00:42:59,160 --> 00:43:03,760

And it's all why I why I think realize now that I was wrong.

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00:43:03,960 --> 00:43:05,920

Well, again, I mean, like I said, it's such an awakening.

753

00:43:06,120 --> 00:43:09,720

It's interesting because I've interviewed Dr.

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00:43:09,920 --> 00:43:12,000

Russell Foster, and he is the guy who

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00:43:12,000 --> 00:43:18,240

actually discovered the chrono receptors in the eye and was laughed at by the world

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00:43:18,440 --> 00:43:21,880

of ophthalmology at that point, there's Rodster's Cones that's that.

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00:43:22,080 --> 00:43:23,280

And he proved it.

758

00:43:23,480 --> 00:43:25,240

And then they were like, oh, shit.

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00:43:25,440 --> 00:43:28,800

So he's actually even though I don't really hear him credited for this by a lot

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00:43:28,800 --> 00:43:31,720

of people that are very big on social media now talking about this,

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00:43:31,920 --> 00:43:33,880

he's the person who actually discovered it.

762

00:43:33,880 --> 00:43:36,240

And so I had him on the show and we talked about this.

763

00:43:36,440 --> 00:43:39,560

And this is this sleep is everything.

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00:43:39,600 --> 00:43:40,680

It's absolutely everything.

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00:43:40,680 --> 00:43:42,280

And he put it as basely as, look,

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00:43:42,480 --> 00:43:45,360

you're supposed to be asleep when it's dark and you're supposed to be awake when

767

00:43:45,560 --> 00:43:50,160

it's light. And so we're asking these people to do the opposite of this swing

768

00:43:50,360 --> 00:43:53,160
shifts or 24 hours at a time.

769
00:43:53,360 --> 00:43:56,560
Yeah, we're defying our biology for everything.

770
00:43:56,760 --> 00:44:01,240
And so in return, the least we could do as a society is make sure that we give them

771
00:44:01,440 --> 00:44:06,800
type of environment where they can recover from that, minimize it as much as you as

772
00:44:06,800 --> 00:44:10,800
much as you can and minimize the impact. But.

773
00:44:11,000 --> 00:44:13,400
Yeah, well, let's go to hormone disruption

774
00:44:13,400 --> 00:44:17,120
because I feel that's a good beginning of the umbrella that we can start unpacking

775
00:44:17,320 --> 00:44:18,160
a lot of the other things.

776
00:44:18,360 --> 00:44:21,720
So now we're kind of getting more kind of long term.

777
00:44:21,720 --> 00:44:24,080
And it doesn't mean I say long term and doesn't have to be years and years.

778
00:44:24,280 --> 00:44:26,640
It's been talking days and months by this point.

779

00:44:26,840 --> 00:44:31,760

But what are you seeing as far as hormonal disruption by sleep deprivation?

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00:44:31,760 --> 00:44:40,960

Oh, so reproductive health is the research on that is blowing my mind and is.

781

00:44:41,160 --> 00:44:46,000

Ah, man, again, underestimated, did not see this coming.

782

00:44:46,200 --> 00:44:50,920

Like we we knew right in the 90s, there was some research on or a couple of review

783

00:44:51,120 --> 00:44:56,560

papers that were put out on reproductive health and women in the fire service.

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00:44:56,560 --> 00:44:59,840

And they basically like laid out, here's the research that needs to happen.

785

00:45:00,040 --> 00:45:01,360

But then none of it happened.

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00:45:01,360 --> 00:45:06,040

And so now what we're seeing on things like everything from fertility for men

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00:45:06,240 --> 00:45:10,280

and women in the fire service, but also miscarriage for women,

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00:45:10,480 --> 00:45:15,320

double the risk for career firefighters in the general population and even higher

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00:45:15,520 --> 00:45:17,760

than that, 42 percent higher for volunteers.

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00:45:17,960 --> 00:45:22,240

So we know, you know, in all those reproductive health pieces are run

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00:45:22,440 --> 00:45:26,360

by your hormones and that the circadian rhythm of your hormones,

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00:45:26,360 --> 00:45:27,240

all those types of things.

793

00:45:27,440 --> 00:45:29,320

So one of the things and we've all again

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00:45:29,320 --> 00:45:32,080

looked at like, oh, what are the carcinogen exposures?

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00:45:32,280 --> 00:45:34,640

But if you think about it, if cars,

796

00:45:34,840 --> 00:45:38,920

the research on volunteer that are that because we found the same result for

797

00:45:39,120 --> 00:45:42,240

preterm labor to where that's where I was like, wait a minute,

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00:45:42,440 --> 00:45:47,440

if if it's all carcinogen exposure and volunteers typically get less exposure

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00:45:47,640 --> 00:45:52,080

than career firefighters on average, what else do they have?

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00:45:52,080 --> 00:45:53,280

Like, what are the other things that are

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00:45:53,480 --> 00:45:58,520

driving the impact of what might be affecting their reproductive health?

802

00:45:58,520 --> 00:46:01,720

Maybe being on call every night.

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00:46:01,920 --> 00:46:06,000

You know, maybe that is maybe that's the bigger the bigger impact.

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00:46:06,000 --> 00:46:10,600

The other thing that's interesting is you see similar fertility, some fertility and

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00:46:10,800 --> 00:46:12,280

preterm.

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00:46:13,560 --> 00:46:15,080

I think it was just miscarriage.

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00:46:15,080 --> 00:46:17,880

I don't know that we asked preterm labor with law enforcement.

808

00:46:18,080 --> 00:46:19,800

And again, like, what's the common?

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00:46:20,000 --> 00:46:22,680

Yeah, they're on the fire ground, but.

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00:46:22,880 --> 00:46:25,120

It can't just be fire ground exposure.

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00:46:25,240 --> 00:46:26,640

They're only there to park their car

812

00:46:26,640 --> 00:46:28,560
in the way of the fire, and then they walk away from it.

813
00:46:28,760 --> 00:46:30,240
They're not really exposed.

814
00:46:30,440 --> 00:46:31,560
Right. Exactly.

815
00:46:31,760 --> 00:46:33,280
Exactly. And their cars don't get cancer.

816
00:46:33,480 --> 00:46:37,760
But but would we see those same, you know, what are what kind of what's

817
00:46:37,960 --> 00:46:42,160
the common thread that is that the chronic inflammation and the stress

818
00:46:42,360 --> 00:46:47,440
and the interrupted circadian rhythm, like what because we, you know,

819
00:46:47,640 --> 00:46:51,560
there there there has to be some common threads and it can't just be

820
00:46:51,760 --> 00:46:52,920
fire ground exposure.

821
00:46:52,920 --> 00:46:55,640
And that's what I think we've always assumed fire ground exposure.

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00:46:55,640 --> 00:46:59,600
But I don't I think that a lot of that

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00:46:59,800 --> 00:47:04,920

reproductive health stuff is driven by not just exposures on the fire ground.

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00:47:05,120 --> 00:47:06,680

We're looking at

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00:47:06,880 --> 00:47:11,560

working with Jeff Bridges, he's looking at anti-malurian hormone AMH.

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00:47:11,600 --> 00:47:13,960

It's hard to I always screw that up when I say it,

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00:47:14,160 --> 00:47:16,800

but I think I got it right that time

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00:47:17,440 --> 00:47:23,000

and found that it basically being in the fire service ages your reproductive health

829

00:47:23,000 --> 00:47:27,520

system faster for women than if you were not.

830

00:47:27,720 --> 00:47:31,960

So looked at new recruits versus women who'd been on for a long time.

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00:47:32,160 --> 00:47:36,440

And then new recruits before recruit school or at the beginning before they

832

00:47:36,440 --> 00:47:37,600

were fire exposed and after.

833

00:47:37,600 --> 00:47:40,600

And now we did before and after fire exposure because the assumption being

834

00:47:40,800 --> 00:47:44,760

that the fire exposure would be a big impact and it probably had a piece of it.

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00:47:44,960 --> 00:47:48,840

But I don't think there's no way that that's all it is.

836

00:47:49,040 --> 00:47:50,040

There's no way.

837

00:47:50,040 --> 00:47:53,720

And the fertility, like if you look at

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00:47:53,920 --> 00:48:01,040

sperm, like the amount and the virility of sperm, even with like, what was it?

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00:48:01,240 --> 00:48:06,680

A week, a week of short sleeping decreased.

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00:48:06,880 --> 00:48:11,440

Sperm motility and virility.

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00:48:11,640 --> 00:48:12,760

That's right.

842

00:48:12,960 --> 00:48:18,040

I don't I have been talking more about sperm than I had in the past, but I you

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00:48:18,040 --> 00:48:22,880

know, the sperm is not as good basically after like one week.

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00:48:23,080 --> 00:48:25,680

So I don't think it's really a shock that

845

00:48:25,880 --> 00:48:30,040
firefighters are forty six male firefighters, forty six percent more likely

846
00:48:30,240 --> 00:48:33,920
to get fertility treatments than the general population.

847
00:48:34,120 --> 00:48:34,960
Well, I've seen it.

848
00:48:35,160 --> 00:48:40,080
I mean, you know, observational research now, the number of firefighter friends,

849
00:48:40,280 --> 00:48:43,880
male and female, that have experienced multiple miscarriages, that have used

850
00:48:43,880 --> 00:48:48,040
fertility treatment, that have had the children with

851
00:48:48,240 --> 00:48:51,840
spina bifida and Down syndrome or pediatric cancer.

852
00:48:52,040 --> 00:48:53,720
I mean, it's everywhere.

853
00:48:53,720 --> 00:48:54,440
And I don't know.

854
00:48:54,640 --> 00:48:58,760
Maybe if I became a carpenter or my carpenter's friends would be going through

855
00:48:58,760 --> 00:48:59,720
that, but I don't think so.

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00:48:59,920 --> 00:49:02,680

I think this is far more rampant in our profession.

857

00:49:02,880 --> 00:49:04,720

I think I think you'd know people, I mean,

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00:49:04,720 --> 00:49:07,680

because I think some of this stuff is environmental and people are not sleeping

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00:49:07,880 --> 00:49:11,320

as much as they should anyway, but in the general population.

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00:49:11,320 --> 00:49:12,160

But I think it would.

861

00:49:12,160 --> 00:49:14,760

I think you would know forty six percent more.

862

00:49:14,960 --> 00:49:16,080

You'd see forty six.

863

00:49:16,280 --> 00:49:21,640

You'd see forty six percent less than if you were a carpenter.

864

00:49:21,840 --> 00:49:25,520

Well, you jumped up for a second when I was listing some of the things.

865

00:49:25,720 --> 00:49:27,640

Health outcomes.

866

00:49:27,840 --> 00:49:28,560

I don't know.

867

00:49:28,560 --> 00:49:32,400

Have you been reading any of the stuff on child health outcomes or some of the

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00:49:32,600 --> 00:49:34,240

conversation going on about it?

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00:49:34,440 --> 00:49:35,920

No, I have not. And I need to.

870

00:49:36,120 --> 00:49:39,840

So this is not going to be good news for you for anyone.

871

00:49:39,840 --> 00:49:44,200

I from a scientific perspective, I'm very excited about this.

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00:49:44,400 --> 00:49:51,240

Is what can we figure out next from a firefighter and child and their and their

873

00:49:51,440 --> 00:49:53,240

family's perspective?

874

00:49:53,440 --> 00:49:55,560

This is this is really going to be bad news.

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00:49:55,760 --> 00:49:59,840

So I apologize for seeming very excited about it because that seems like an asshole

876

00:49:59,840 --> 00:50:03,760

thing to do. But this is an opportunity to learn from it and fix things.

877

00:50:03,960 --> 00:50:05,360

That's the excitement. Oh, my gosh.

878

00:50:05,360 --> 00:50:10,560

So there was there was one study out of Kitsap, Washington.

879

00:50:10,760 --> 00:50:16,280

It was an EFO report and it found a really high rate of pediatric cancers among

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00:50:16,480 --> 00:50:21,080

offspring of firefighters in a specific department like the I should reach out to

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00:50:21,080 --> 00:50:23,240

the guy and talk to him because I cite him all the time.

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00:50:23,440 --> 00:50:25,240

But it was an extremely high rate.

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00:50:25,240 --> 00:50:27,320

And he did his EFO report and research

884

00:50:27,320 --> 00:50:31,480

childhood cancers because so many kids in his department, so many of the kids of his

885

00:50:31,680 --> 00:50:34,720

firefighters have had had had had cancer.

886

00:50:34,720 --> 00:50:36,800

So he basically standardized the rates.

887

00:50:37,000 --> 00:50:40,480

But it wasn't like the rate was extremely high.

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00:50:40,480 --> 00:50:43,840

So I think it wasn't generalizable to the population as a whole.

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00:50:44,040 --> 00:50:51,280

But when we looked at one, it's definitely something that needs more research.

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00:50:51,480 --> 00:50:54,880

We just published with Miriam Culkins at NIOSH.

891

00:50:55,080 --> 00:51:00,720

We worked on a study looking at birth defects in the offspring of male

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00:51:00,920 --> 00:51:03,640

firefighters. So it's this huge database.

893

00:51:03,640 --> 00:51:06,080

And there were not that many male firefighters.

894

00:51:06,080 --> 00:51:10,840

I can't remember how many we ended up having all together, but they owned several,

895

00:51:10,840 --> 00:51:14,320

I think, four or five birth defects that in that population, even though there were

896

00:51:14,520 --> 00:51:18,720

not that many firefighters, were increased among the offspring of firefighters.

897

00:51:18,920 --> 00:51:23,960

So the question really is like, it can't just be that like we need to look bigger.

898

00:51:23,960 --> 00:51:24,880

We need to look broader.

899

00:51:25,080 --> 00:51:29,560

We need to figure out what's, you know, what's going on there.

900

00:51:29,680 --> 00:51:31,120
We've put a couple of studies together,

901
00:51:31,120 --> 00:51:34,880
we're a couple under review and then a couple we've had discussions about.

902
00:51:35,080 --> 00:51:37,800
It's a hard question to answer, right, because you have to ask,

903
00:51:38,000 --> 00:51:41,560
you got to access the firefighters, you got to ask, get valid information

904
00:51:41,560 --> 00:51:42,680
about the kids, those types of things.

905
00:51:42,680 --> 00:51:44,520
So we're trying to figure out the best way to do it.

906
00:51:44,720 --> 00:51:48,920
But when I was on like a planning meeting with a bunch of firefighters,

907
00:51:49,120 --> 00:51:52,280
or a bunch of scientists, and we started saying, like, all right,

908
00:51:52,280 --> 00:51:56,200
here's the challenges, you know, it's the exposures, it's the because we do know

909
00:51:56,200 --> 00:51:58,800
that there's epigenetic changes in sperm, it looks like.

910
00:51:59,000 --> 00:52:00,840
But there's the exposures.

911

00:52:00,840 --> 00:52:02,520
There's the circadian rhythm disruption.

912
00:52:02,520 --> 00:52:04,040
There's the we're laying out all these things.

913
00:52:04,040 --> 00:52:07,680
And they're like, oh, yeah, we would definitely expect to see

914
00:52:07,880 --> 00:52:09,480
higher

915
00:52:09,760 --> 00:52:13,120
issues with it in the offspring of firefighters.

916
00:52:13,320 --> 00:52:15,760
And I'm like, why? Like it was just like assumed.

917
00:52:15,760 --> 00:52:17,520
Oh, yeah, I mean, we can help you quantify it.

918
00:52:17,720 --> 00:52:20,040
But but it was everything from like

919
00:52:20,240 --> 00:52:23,600
autism spectrum disorders to attention deficit.

920
00:52:23,800 --> 00:52:25,800
So more research needs to be done.

921
00:52:26,000 --> 00:52:28,600
But I think that's another area

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00:52:28,600 --> 00:52:33,280
when we look at impact. And the other piece of that is

923
00:52:33,480 --> 00:52:36,040
that we have no data on but has been raised.

924
00:52:36,240 --> 00:52:38,000
What about like that generational?

925
00:52:38,200 --> 00:52:43,000
Like if you have three generations of firefighters and is there,

926
00:52:43,200 --> 00:52:47,240
you know, are you basically like collecting everybody's

927
00:52:47,440 --> 00:52:48,920
negative health impacts?

928
00:52:49,120 --> 00:52:50,840
You know, I

929
00:52:51,040 --> 00:52:52,280
I don't I don't know.

930
00:52:52,480 --> 00:52:54,040
Again, more research is needed.

931
00:52:54,240 --> 00:52:55,440
But

932
00:52:55,440 --> 00:53:00,040
yeah, that's it's that's an area that you'll see more on it.

933

00:53:00,240 --> 00:53:03,200

We're doing what we can to to design the studies now.

934

00:53:03,400 --> 00:53:06,600

But it's funny because when we put in a first proposal for that, like five years

935

00:53:06,800 --> 00:53:10,600

ago, we didn't even get past fire service relevance at FEMA.

936

00:53:10,600 --> 00:53:13,000

They're like, well, this really isn't a firefighter health issue.

937

00:53:13,200 --> 00:53:15,840

That's a firefighter off

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00:53:16,040 --> 00:53:17,200

offspring health issue.

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00:53:17,400 --> 00:53:21,520

But now we're like, well, I don't think anyone would argue that now.

940

00:53:21,520 --> 00:53:23,600

Like it easily gets through fire service relevance.

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00:53:23,600 --> 00:53:26,520

It now comes down to like the science. But

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00:53:26,720 --> 00:53:30,520

if you look at things like reproductive health, miscarriage,

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00:53:30,720 --> 00:53:34,480

fertility issues, child health outcomes and you look at those,

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00:53:34,680 --> 00:53:38,280

everyone's talking about cancer, but if you look at those as more proximal

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00:53:38,480 --> 00:53:45,840

health outcomes of the total occupational exposure.

946

00:53:46,040 --> 00:53:47,680

That gives you things, you know, cancer,

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00:53:47,880 --> 00:53:50,880

we have to wait 30 years for that develop to develop.

948

00:53:50,880 --> 00:53:57,120

But we know that risk factors that we're looking at now and you can see that.

949

00:53:57,320 --> 00:54:00,600

Basically faster, because it's the same risk factors.

950

00:54:00,600 --> 00:54:02,400

It's the interrupted sleep. It's the exposures.

951

00:54:02,600 --> 00:54:06,960

It's the stress that the chronic inflammation type stuff.

952

00:54:07,160 --> 00:54:11,280

So I think it's we can't we can't go, oh, that's not it's not cancer.

953

00:54:11,280 --> 00:54:14,600

So it's not important because it is all it's all those risk factors.

954

00:54:14,800 --> 00:54:17,640

It's just looking at them, you know, earlier.

955

00:54:17,840 --> 00:54:20,240

Basically, well, I mean, you ask a firefighter,

956

00:54:20,240 --> 00:54:23,320

would you rather your child have cancer or you

957

00:54:23,520 --> 00:54:24,880

the child is going to be more important.

958

00:54:25,080 --> 00:54:27,440

So it is absolutely fire, fire relevant.

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00:54:27,640 --> 00:54:31,680

Well, and that the other thing that I think we can use it as is like

960

00:54:31,880 --> 00:54:35,240

I hear all the time like, oh, you know, but you don't die from cancer, from cancer

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00:54:35,440 --> 00:54:37,320

till you're old, you're going to die of something.

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00:54:37,520 --> 00:54:41,440

Hopefully, if I have cancer, I just, you know, don't catch it till late and I die

963

00:54:41,640 --> 00:54:45,320

quickly, like, first of all, you never think that once you're dying.

964

00:54:45,520 --> 00:54:48,360

I have never met a firefighter who's like, man,

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00:54:48,360 --> 00:54:51,680

I'm so glad I waited for my cancer to be diagnosed.

966

00:54:51,880 --> 00:54:53,040

Yeah, exactly.

967

00:54:53,240 --> 00:54:55,200

I was right. You die sometime anyway.

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00:54:55,400 --> 00:54:57,320

I'm fine. I'm fine.

969

00:54:57,520 --> 00:55:01,600

But you say, oh, all right, then don't you know, you don't need to worry about this

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00:55:01,800 --> 00:55:05,080

now because you are going to die someday, but you might need to worry about it

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00:55:05,280 --> 00:55:10,120

because having a child with a disability takes a lot of time, money and energy

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00:55:10,320 --> 00:55:12,720

and is very stressful. So like, don't do that.

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00:55:12,920 --> 00:55:16,920

So I think for some people who we can't hook them on the like at 70, you might

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00:55:16,920 --> 00:55:20,760

have cancer, you can it well, except that we are seeing firefighters

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00:55:20,960 --> 00:55:23,560

get develop cancer younger than the general population, too.

976

00:55:23,760 --> 00:55:24,840

But

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00:55:26,160 --> 00:55:30,520

but I think that some of those folks, you can hook them on.

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00:55:30,720 --> 00:55:35,520

If this is not just about cancer, this is this is about your kids health.

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00:55:35,720 --> 00:55:41,040

It's about your, you know, their kids, like it's just it's a bigger picture than

980

00:55:41,240 --> 00:55:44,720

that, it's about can you get your wife pregnant or can you get pregnant?

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00:55:44,720 --> 00:55:47,080

So absolutely.

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00:55:47,280 --> 00:55:51,440

Well, one metric that we do have that will be a beautiful indicator of a lot of these

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00:55:51,640 --> 00:55:55,040

being a potential is the hormonal blood work.

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00:55:55,240 --> 00:55:58,200

One of the real moments I had, again, as I

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00:55:58,400 --> 00:56:02,160

become this perpetual student from all these people that I interview now

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00:56:02,360 --> 00:56:07,200

was the immense breakdown of testosterone from sleep deprivation.

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00:56:07,400 --> 00:56:11,480

And the old school thinking was, you know, our men and women go in and say they

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00:56:11,480 --> 00:56:15,800

happen to actually get those done, the male would say, oh, well, the doctor will say,

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00:56:16,000 --> 00:56:17,640

oh, you're fine, you got three hundred.

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00:56:17,840 --> 00:56:22,440

Well, you know, from one fifty to nine fifty, whatever it was that when that was

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00:56:22,640 --> 00:56:27,840

done in the one of the Ivy League schools, the nine fifty was the 18 year old

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00:56:28,040 --> 00:56:33,080

quarterback brimming with everything that teenagers brim with.

993

00:56:33,280 --> 00:56:37,960

And then the one fifty was the 80 year old dude, you know, sedentary dude that was

994

00:56:37,960 --> 00:56:42,720

about to croak any second. And so, you know, so it was woefully

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00:56:42,920 --> 00:56:47,520

under recognized, but then there was a full pendulum swing where men's clinics

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00:56:47,520 --> 00:56:50,400

opened up everywhere. And this is where I think it's even worse.

997

00:56:50,600 --> 00:56:54,800

So now you've got 30 year old firefighters whose testosterone is in the toilet,

998

00:56:54,800 --> 00:56:56,040

which seems to be an epidemic.

999

00:56:56,240 --> 00:56:59,960

And again, it's a complete correlation between the two.

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00:57:00,160 --> 00:57:03,720

But rather than being told about their nutrition, their strength,

1001

00:57:03,720 --> 00:57:07,920

their conditioning, their sleep quality when they can control it,

1002

00:57:08,120 --> 00:57:12,360

they're just being prescribed TRT, which is now breaking down their innate

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00:57:12,360 --> 00:57:13,720

ability to make testosterone.

1004

00:57:13,720 --> 00:57:15,240

And now they're a drug addict for life.

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00:57:15,440 --> 00:57:19,520

So what have you seen as far as, you know, a very quantifiable element,

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00:57:19,720 --> 00:57:23,960

which is testosterone levels in both male and females in the fire service?

1007

00:57:24,160 --> 00:57:29,600

So I don't think that we have at least I know IFF was working on a white paper on

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00:57:29,600 --> 00:57:35,000

that. I don't think that we have a great published data on that.

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00:57:35,000 --> 00:57:37,920

Although I've started talking to some of the health groups because some

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00:57:37,920 --> 00:57:39,280
departments want to measure that.

1011
00:57:39,480 --> 00:57:41,280
The other piece with testosterone, too,

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00:57:41,480 --> 00:57:45,360
is that Denise Smith just published on

1013
00:57:45,560 --> 00:57:50,200
the importance of testosterone and its role in cardiovascular disease and

1014
00:57:50,200 --> 00:57:51,760
increasing cardiovascular risk factors.

1015
00:57:51,960 --> 00:57:57,440
So I think that's another another piece beyond just, you know, beyond the that to

1016
00:57:57,440 --> 00:58:01,080
add to the conversation, I guess. So I don't think that we have great data.

1017
00:58:01,280 --> 00:58:07,160
Mostly health providers I know who who do have they're saying exactly what you're

1018
00:58:07,360 --> 00:58:13,280
saying. It's like either everyone in the departments on testosterone or no one is

1019
00:58:13,280 --> 00:58:15,200
and no one's and no one's talking about it.

1020
00:58:15,400 --> 00:58:17,080
So it's one one end or the other.

1021

00:58:17,280 --> 00:58:19,720

I don't know that we have great data on it,

1022

00:58:19,920 --> 00:58:24,520

partly because it's not typically added to the health exams.

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00:58:24,520 --> 00:58:27,600

I don't I don't think.

1024

00:58:29,880 --> 00:58:31,400

Actually, I'm going to have to think about that.

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00:58:31,400 --> 00:58:33,520

I don't think that it's in standard exams.

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00:58:33,520 --> 00:58:36,720

Some departments, I know, test it, but I don't know that I've seen anything

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00:58:36,920 --> 00:58:40,960

published on it, I think is my is my answer on that.

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00:58:41,160 --> 00:58:44,480

But I do know it. I mean, I'm not at all surprised that it's an issue.

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00:58:44,680 --> 00:58:48,320

And I'm also not at all surprised that the

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00:58:48,520 --> 00:58:52,280

that the range is that I mean, it's kind of like with thyroid functioning thyroid

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00:58:52,280 --> 00:58:56,640

function test, right, like we used to say, OK, the range is relatively wide.

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00:58:56,840 --> 00:58:58,720

And as long as you are within that range.

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00:58:58,920 --> 00:59:05,400

But if I not small part of the general population actually does have thyroid

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00:59:05,600 --> 00:59:11,120

dysfunction, then you're including scores that are in that are actually causing

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00:59:11,320 --> 00:59:14,440

symptoms in that range as well. So

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00:59:14,640 --> 00:59:17,720

well, and also understanding the free testosterone and same with the thyroid,

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00:59:17,920 --> 00:59:21,560

the free thyroid versus the the ones that people normally measure,

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00:59:21,560 --> 00:59:23,280

because you could look and go, oh, you're fine.

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00:59:23,320 --> 00:59:26,720

But it doesn't mean that that is available for the body to actually use.

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00:59:26,920 --> 00:59:31,000

So as we progress and move on, I think these these companies like Transcend,

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00:59:31,200 --> 00:59:33,000

who I use, are amazing.

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00:59:33,200 --> 00:59:37,560

They do such a thorough blood work and then they have middle of the road solution.

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00:59:37,560 --> 00:59:42,440

Now, the ultimate solution is to get back to homeostasis naturally and then live

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00:59:42,440 --> 00:59:45,360

in the Garden of Eden. But if you are going to be working shift work,

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00:59:45,560 --> 00:59:50,000

then you've got some of these supplementations like DHEA and peptides that you

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00:59:50,000 --> 00:59:54,600

can do that just bolster your body rather than being hooked on CRT.

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00:59:54,800 --> 00:59:57,160

And there's no way back from that.

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00:59:57,360 --> 01:00:02,720

Yeah, I and I think that you're right on with the you can't just.

1049

01:00:02,920 --> 01:00:04,400

I don't.

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01:00:05,080 --> 01:00:07,320

I think.

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01:00:08,360 --> 01:00:13,800

I was going to say something not kind about dock in the box, and if you have a

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01:00:14,000 --> 01:00:17,960

if you have a billboard, that probably means.

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01:00:17,960 --> 01:00:20,280

If you need a billboard billboard,

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01:00:20,480 --> 01:00:23,160

but I'm not going to say that because I don't have evidence to support that.

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01:00:23,160 --> 01:00:24,760

Maybe they're all doing great jobs.

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01:00:24,960 --> 01:00:26,760

But

1057

01:00:27,080 --> 01:00:29,360

yeah, I think you're right. You have to be really thoughtful about that.

1058

01:00:29,360 --> 01:00:30,560

You have to make sure that you're testing.

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01:00:30,560 --> 01:00:34,280

I mean, there is that specific algorithm of how you test when you test those types

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01:00:34,280 --> 01:00:37,920

of things. And so I think it's often that's not taken into consideration.

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01:00:38,120 --> 01:00:40,200

But absolutely.

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01:00:40,400 --> 01:00:44,600

Well, I mean, low testosterone, for example, can

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01:00:44,800 --> 01:00:46,200

contribute to not only, like you say,

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01:00:46,200 --> 01:00:48,920

to cardiovascular ill health, but also weight gain.

1065

01:00:49,120 --> 01:00:51,680

And then it's imperative for mental good health as well.

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01:00:51,880 --> 01:00:54,080

So now you've got another layer to this

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01:00:54,280 --> 01:00:55,840

is your day functioning.

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01:00:56,040 --> 01:01:00,760

I mean, that's the that's the thing is it's yeah, it's also interrelated.

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01:01:00,960 --> 01:01:03,080

But the

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01:01:03,280 --> 01:01:06,240

apoco optimist in me says it's also interrelated.

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01:01:06,440 --> 01:01:09,920

So if you start improving one, you're going to be improving the others.

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01:01:10,120 --> 01:01:13,240

Exactly. So it's high return on investment personally.

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01:01:13,360 --> 01:01:15,120

And I do think you brought up the like

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01:01:15,120 --> 01:01:18,160

the things that you can do and that's you know,

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01:01:18,360 --> 01:01:20,640

yeah, someone's going to have to be up in the middle of the night.

1076

01:01:20,840 --> 01:01:23,880
But I think it does make it even more

1077
01:01:24,080 --> 01:01:28,000
important that people prioritize their sleep, understand what they can do

1078
01:01:28,200 --> 01:01:32,640
and do what they can when they can, you know, and over an all nighter every once

1079
01:01:32,840 --> 01:01:35,640
in a while is not just a no big deal.

1080
01:01:35,640 --> 01:01:38,240
Like that is actually incredibly bad for your sleep,

1081
01:01:38,440 --> 01:01:42,960
particularly if every other day of the month or 20 days a month,

1082
01:01:42,960 --> 01:01:44,880
you're going to have really crappy sleep anyway.

1083
01:01:44,880 --> 01:01:48,280
Oh, there was also sorry, I just

1084
01:01:48,480 --> 01:01:49,640
love it.

1085
01:01:49,840 --> 01:01:51,440
Other studies and I'm like, oh, yeah.

1086
01:01:51,640 --> 01:01:54,840
And there was a study that I recently read.

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01:01:54,840 --> 01:01:59,560

It was a review and it's actually a newer measure, a newer assessment of sleep.

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01:01:59,760 --> 01:02:01,800

Because, you know, before it was primarily

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01:02:02,000 --> 01:02:08,200

measuring like total sleep time or sleep opportunity is one of the major outcomes.

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01:02:08,400 --> 01:02:09,760

So I just read an article.

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01:02:09,960 --> 01:02:13,560

I can't remember what it was, what they what the term they called or like what

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01:02:13,560 --> 01:02:18,200

they called the measure, but the outcome of it was looking at

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01:02:18,400 --> 01:02:25,240

consistency of sleep and they found that unrelated to.

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01:02:25,440 --> 01:02:28,080

Unrelated to the or in addition to

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01:02:28,280 --> 01:02:31,880

independent of independent of is the word I'm looking for.

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01:02:32,080 --> 01:02:37,680

I don't think I my flight was late last night, so I did not sleep great.

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01:02:37,880 --> 01:02:40,600

But independent of your total sleep time,

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01:02:40,600 --> 01:02:44,960
the consistency of your sleep is also a key driver.

1099
01:02:45,160 --> 01:02:48,680
And how can they use they had they developed an assessment of it.

1100
01:02:48,880 --> 01:02:54,560
So basically how consistent is it is that you will be asleep at the same time

1101
01:02:54,760 --> 01:02:57,840
at night and the next day. But I think they even so this.

1102
01:02:58,040 --> 01:03:03,200
And I think if I'm remembering this correctly, they looked at added in like if

1103
01:03:03,400 --> 01:03:04,880
you're consistently napping.

1104
01:03:05,080 --> 01:03:07,880
So basically, as long as you your score is

1105
01:03:07,880 --> 01:03:11,720
based on if you are asleep at the same time, how consistent you are.

1106
01:03:11,920 --> 01:03:15,080
And it's a score from zero to 100 on how

1107
01:03:15,280 --> 01:03:18,640
likely it is you're going to be asleep at the same time every day.

1108
01:03:18,840 --> 01:03:23,480
And that independent of total sleep time was.

1109

01:03:23,680 --> 01:03:29,320

And sleep opportunity was predictive of mortality and several other outcomes.

1110

01:03:29,520 --> 01:03:32,880

Interesting, right?

1111

01:03:33,080 --> 01:03:37,040

Well, let's talk about the weight gain, because I think this is a big part.

1112

01:03:37,040 --> 01:03:38,880

You know, again, you've got the diabetes.

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01:03:38,880 --> 01:03:40,600

I mean, they show how there's a complete

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01:03:40,800 --> 01:03:43,640

insulin disruption with one night of not sleeping.

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01:03:43,840 --> 01:03:46,520

But then you've obviously got this hormonal disruption.

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01:03:46,720 --> 01:03:52,800

So talk to me about the the impact on sleep deprivation for the ability

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01:03:53,000 --> 01:03:56,480

for the body to maintain a good body composition.

1118

01:03:56,680 --> 01:03:58,600

Horrible one.

1119

01:03:58,800 --> 01:04:02,280

I mean, I think that sums it up quite nicely in a scientific term.

1120

01:04:02,480 --> 01:04:05,600

But for several different reasons, like one,

1121

01:04:05,600 --> 01:04:10,440

because it controls when you feel hungry and when you don't feel hungry.

1122

01:04:10,640 --> 01:04:14,240

So you actually are hungrier if you have this interrupted circadian rhythm.

1123

01:04:14,440 --> 01:04:17,720

There was a guy out of Dr. Panda from the Salk Institute.

1124

01:04:17,920 --> 01:04:22,120

He did a study in San Diego where they did circadian feeding.

1125

01:04:22,320 --> 01:04:27,480

And his hypothesis was that the interrupted circadian rhythms from shift work are not

1126

01:04:27,680 --> 01:04:32,920

only because of the sleep wake cycle, but that part of what controls the circadian

1127

01:04:32,920 --> 01:04:36,960

rhythm is when you when you eat.

1128

01:04:37,160 --> 01:04:41,640

So you basically are telling your body if you're if you get back to the station

1129

01:04:41,640 --> 01:04:44,800

and eat a brownie, you're telling your body like, oh, it's time to wake up.

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01:04:44,840 --> 01:04:46,720

You know, we're doing wake up things and we're.

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01:04:46,920 --> 01:04:54,040

And so if you can also limit your feeding windows to the times that you are,

1132

01:04:54,240 --> 01:04:55,560

you're.

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01:04:55,760 --> 01:04:59,280

You should be awake that that can also be helpful.

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01:04:59,280 --> 01:05:06,160

He did some really interesting studies in mice early on, but it looks like that is

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01:05:06,360 --> 01:05:09,720

also a part of it. So it's everything from like how hungry you are.

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01:05:09,720 --> 01:05:13,120

And obviously you're going to eat more if you're hungry

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01:05:13,320 --> 01:05:16,720

to just the way your body uses the calories that it had.

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01:05:16,920 --> 01:05:21,000

Like, it's just all it all goes back to sleep.

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01:05:21,200 --> 01:05:22,680

It all goes back to sleep.

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01:05:22,880 --> 01:05:25,640

This is why I feel so stupid for not seeing it earlier.

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01:05:25,640 --> 01:05:29,120

What made you because you were really early adopter on this topic.

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01:05:29,320 --> 01:05:31,120
It was Kirk Parsley hands down.

1143
01:05:31,120 --> 01:05:34,120
I was listening to my 75 minute commute.

1144
01:05:34,120 --> 01:05:37,720
I listen to podcasts all the time to Joe Rogan, Tim Ferriss and then barbell

1145
01:05:37,920 --> 01:05:40,520
shrug the old crew and they had him on.

1146
01:05:40,520 --> 01:05:44,000
They were talking obviously about the impact of sleep on performance in the gym.

1147
01:05:44,200 --> 01:05:46,000
They weren't shift workers.

1148
01:05:46,200 --> 01:05:52,040
But when he started kind of telling about how he had these uber athlete seals

1149
01:05:52,040 --> 01:05:56,280
because he was a seal pre 9 11 went to med school, came back as their physician,

1150
01:05:56,480 --> 01:06:01,720
the West Coast Seal team, and for a year he just kept seeing the blood work come

1151
01:06:01,720 --> 01:06:03,720
back and he's like, they're like eight year old women.

1152
01:06:03,720 --> 01:06:04,600
What's going on?

1153

01:06:04,800 --> 01:06:08,160

There's no complete disconnect between who they are, what they can do and then what

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01:06:08,360 --> 01:06:11,840

the shows. And so after about a year, he realized

1155

01:06:11,840 --> 01:06:15,240

that nearly all of them were on Ambien, which again, you don't get sleep with a

1156

01:06:15,440 --> 01:06:16,760

sleep pill, you're just unconscious.

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01:06:16,960 --> 01:06:19,680

So and so he was able to persuade his

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01:06:19,680 --> 01:06:25,080

command in his profession, people actually listen to active health advice

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01:06:25,280 --> 01:06:28,200

and they were able to shift because they were doing a lot of night training and

1160

01:06:28,200 --> 01:06:31,040

kind of reframe it in a way where they got a lot more sleep.

1161

01:06:31,240 --> 01:06:35,720

And then he actually developed a formula I used to this day on occasion

1162

01:06:35,920 --> 01:06:39,640

where it was just vitamin D and tryptophan and magnesium and

1163

01:06:39,840 --> 01:06:44,000

tiny bit of melatonin to initiate the sleep cascade and got all these guys off

1164

01:06:44,200 --> 01:06:47,360
Ambien. So while I'm listening to this and he's

1165
01:06:47,360 --> 01:06:50,760
talking about the acute effects of sleep deprivation, the chronic effects of sleep

1166
01:06:50,760 --> 01:06:54,280
deprivation, and I've always said firefighters don't die of one thing, they

1167
01:06:54,480 --> 01:06:57,080
die of everything, whatever the weakest link is.

1168
01:06:57,280 --> 01:06:59,360
And so it just made so much sense to me.

1169
01:06:59,560 --> 01:07:04,000
It's not just carcinogens in a fire that are causing cancer,

1170
01:07:04,200 --> 01:07:07,520
and it's not just the trauma that we're seeing that are causing suicides.

1171
01:07:07,520 --> 01:07:11,120
There's everything from childhood trauma through to the massive impact of sleep

1172
01:07:11,320 --> 01:07:14,600
deprivation. So it was a real penny drop for me,

1173
01:07:14,600 --> 01:07:18,400
a penny drop, not a panty drop for anyone that misheard that.

1174
01:07:19,680 --> 01:07:24,200
But I guess, I mean, educationally, maybe.

1175

01:07:24,400 --> 01:07:26,560
But yeah, and then it just everything aligned.

1176
01:07:26,760 --> 01:07:28,160
You drop.

1177
01:07:30,080 --> 01:07:33,160
But yeah, and everything is I had a background ex-fizz,

1178
01:07:33,360 --> 01:07:35,040
you know, and athlete and a coach.

1179
01:07:35,040 --> 01:07:38,320
So I had some of the pieces as well, but that was that was just it.

1180
01:07:38,320 --> 01:07:39,400
That was the missing piece.

1181
01:07:39,600 --> 01:07:42,000
And so I had this massive aha moment.

1182
01:07:42,000 --> 01:07:46,800
Your training and background, like, did you talk about sleep back when you went

1183
01:07:47,000 --> 01:07:49,320
through school and back when you.

1184
01:07:49,520 --> 01:07:53,080
No, no. And this is the I mean, I remember, for example, in London,

1185
01:07:53,280 --> 01:07:56,600
because I did kind of like the A.S. in London and then my E.A.

1186

01:07:56,600 --> 01:08:00,160

and U.F. like literally just a few years ago, I haven't picked up my diploma yet,

1187

01:08:00,360 --> 01:08:02,920

but I've got it, my bachelor's.

1188

01:08:03,120 --> 01:08:07,200

But I remember I'm talking about them processing

1189

01:08:07,400 --> 01:08:10,960

learn skills when you sleep, and I thought that was interesting.

1190

01:08:10,960 --> 01:08:14,080

And then fast forward, you know, it explains why the next morning,

1191

01:08:14,080 --> 01:08:16,720

I can't remember the not that I was trying to tie the day before.

1192

01:08:16,920 --> 01:08:19,520

There's actually an issue behind that.

1193

01:08:19,720 --> 01:08:23,200

So, yeah, so it wasn't that we had really learned about it before.

1194

01:08:23,200 --> 01:08:26,280

It's just that, you know, because in sports science, it's very, very myopic.

1195

01:08:26,280 --> 01:08:27,360

And that was disappointing.

1196

01:08:27,560 --> 01:08:32,280

You study a very few slithers of things, but it doesn't make you a good coach,

1197

01:08:32,480 --> 01:08:34,000
in my opinion.

1198

01:08:34,200 --> 01:08:39,480

So, yeah, it was more just the kind of lived experience and then combining what I

1199

01:08:39,480 --> 01:08:43,720

did know about physiology and some of these other areas and then sleep just like you.

1200

01:08:43,920 --> 01:08:46,600

One day someone slides it onto the table

1201

01:08:46,800 --> 01:08:51,240

in front of you and like, how the hell did I not factor this in?

1202

01:08:51,440 --> 01:08:52,560

It makes perfect sense.

1203

01:08:52,760 --> 01:08:57,360

Every animal goes to sleep and we are animals, no matter what anyone says.

1204

01:08:57,560 --> 01:08:58,600

Yep.

1205

01:08:58,800 --> 01:09:00,360

Yeah.

1206

01:09:00,640 --> 01:09:03,480

A good thing we're seeing it now, right?

1207

01:09:03,680 --> 01:09:04,480

Absolutely.

1208

01:09:04,680 --> 01:09:06,320
So then back to the obesity then.

1209
01:09:06,320 --> 01:09:11,320
So just kind of talk to me about some of the impacts on the human body that from

1210
01:09:11,520 --> 01:09:16,080
sleep deprivation that, you know, over time will, you know, will lead to obesity

1211
01:09:16,280 --> 01:09:19,680
unless someone's very diligent with their diet and exercise.

1212
01:09:19,880 --> 01:09:26,120
So I do I think appetite is one of the major drivers that

1213
01:09:26,320 --> 01:09:28,360
you just.

1214
01:09:29,320 --> 01:09:33,000
You're more hungry the more you eat, the less you're able to manage your calories.

1215
01:09:33,000 --> 01:09:36,720
So I think that's a big a big piece of it.

1216
01:09:36,920 --> 01:09:40,880
And then I think that what were some of the other things?

1217
01:09:41,600 --> 01:09:44,600
I so oh, so one, the being hungry,

1218
01:09:44,800 --> 01:09:50,000
wanting to eat more and also not having enough sleep makes you more likely or less

1219

01:09:50,200 --> 01:09:53,240
likely to.

1220
01:09:53,920 --> 01:09:58,040
Engage in physical activity, so I think it's both of like all in addition to all

1221
01:09:58,240 --> 01:10:02,280
the hormone dysregulation, I also think that it's the even just the health

1222
01:10:02,280 --> 01:10:07,480
behaviors. And I also think probably more likely to drink alcohol as a coping

1223
01:10:07,680 --> 01:10:10,480
mechanism if you're not doing like it's all tied together.

1224
01:10:10,480 --> 01:10:12,760
Right. So if you're not using that,

1225
01:10:12,960 --> 01:10:17,600
we use physical activity to maintain, manage my stress levels when you use

1226
01:10:17,600 --> 01:10:19,000
alcohol. So I think it's that too.

1227
01:10:19,200 --> 01:10:22,360
I mean, I think it's I think it's all interrelated.

1228
01:10:22,560 --> 01:10:24,880
Yeah. Well, I mean, those low hormones,

1229
01:10:25,080 --> 01:10:30,960
testosterone is what gives you that kind of motivation to go get under a barbell.

1230

01:10:30,960 --> 01:10:36,200

You know, so I mean, there's an actual measured hormonal response to sleep

1231

01:10:36,400 --> 01:10:38,280

deprivation that takes that away from you.

1232

01:10:38,480 --> 01:10:40,920

And a lot of people feel exhausted from it.

1233

01:10:41,120 --> 01:10:42,640

Yeah, yeah.

1234

01:10:42,840 --> 01:10:48,640

And if like if you're if you're tired all the time, you are all the health behaviors

1235

01:10:48,840 --> 01:10:50,840

become more challenging to do.

1236

01:10:51,040 --> 01:10:53,920

So I think it all plays in together.

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01:10:54,120 --> 01:10:54,960

Absolutely.

1238

01:10:55,160 --> 01:10:58,480

Well, you can touch on this before the World Health Organization has sleep

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01:10:58,480 --> 01:11:01,600

deprivation as or shift work as a probable carcinogen.

1240

01:11:01,800 --> 01:11:06,680

And again, they're probably studying people that don't work 56, 80 hour weeks

1241

01:11:06,880 --> 01:11:08,400
with 24 hour shifts.

1242

01:11:08,600 --> 01:11:13,080

So with that being said, though, talk to me about what you've learned as far

1243

01:11:13,280 --> 01:11:16,560

as the correlation between sleep deprivation and cancer.

1244

01:11:16,760 --> 01:11:20,520

So so the shift works, the comment about the shift,

1245

01:11:20,720 --> 01:11:24,960

most of the shift work is based on like nurses and physicians, right?

1246

01:11:25,160 --> 01:11:27,680

Which, yes, they have to be up at night,

1247

01:11:27,680 --> 01:11:32,280

but they don't tend to be up at the same with the same regularity, you know, as as

1248

01:11:32,480 --> 01:11:35,080

firefighters do. So I think that's why it's important to have

1249

01:11:35,280 --> 01:11:43,080

specific research to research very specific to firefighters because it's it's.

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01:11:43,280 --> 01:11:46,880

It's just not the same and even law enforcement, you know, where we see

1251

01:11:47,080 --> 01:11:51,680

actually on several cancers, there was a study that was just done out of

1252

01:11:51,880 --> 01:11:56,520

Ontario and cancer rates for.

1253

01:11:56,520 --> 01:12:01,320

Law enforcement officers for several cancers were similar to cancer

1254

01:12:01,520 --> 01:12:05,560

rates for firefighters. And again, what could that be?

1255

01:12:05,760 --> 01:12:07,800

You know, it's not that they're fighting

1256

01:12:08,000 --> 01:12:11,640

fires or going interior and managing those exposures.

1257

01:12:11,640 --> 01:12:14,680

So I think it could be some of that shift work piece of it, too.

1258

01:12:14,880 --> 01:12:17,400

But their shifts are very.

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01:12:17,600 --> 01:12:20,320

They're very different. And that's the thing, you know, when people say, oh,

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01:12:20,320 --> 01:12:22,840

because I have had people say like, oh, everyone should just go to eight hour

1261

01:12:22,840 --> 01:12:27,200

shifts, but someone has to be up at night, so someone's going to have the impact.

1262

01:12:27,400 --> 01:12:31,080

And you do want as much consistency as possible.

1263

01:12:31,280 --> 01:12:34,320

So it'd be even worse to go between like day shifts and night shifts.

1264

01:12:34,520 --> 01:12:39,440

So so I think that with the relationship to cancer, so they classified it.

1265

01:12:39,640 --> 01:12:41,160

I want to I want to say it's a probable

1266

01:12:41,360 --> 01:12:49,400

person, and I think it to be and I think it's probably due to the impact on

1267

01:12:49,400 --> 01:12:52,840

just the impact on the immune system. Right.

1268

01:12:53,040 --> 01:12:57,280

There was one study or I think a summary or maybe this is from your I'm not sure

1269

01:12:57,480 --> 01:13:01,760

where I pulled this, but I have a note on it that specifically linked to breast

1270

01:13:01,760 --> 01:13:04,680

cancer, prostate cancer, cancers of the uterus and colon cancer.

1271

01:13:04,880 --> 01:13:09,720

But if you look at like those what breast cancer, prostate cancer,

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01:13:09,720 --> 01:13:12,680

I mean, those are the endocrine disrupting chemical cancers.

1273

01:13:12,680 --> 01:13:14,320

That's the reproductive health cancers.

1274

01:13:14,320 --> 01:13:16,600

It's all, you know, also has to do with the hormones.

1275

01:13:16,600 --> 01:13:21,680

So I think it has it's likely and Jeff Burgess says that he thinks a lot of

1276

01:13:21,880 --> 01:13:25,440

what's driving that really that relationship is inflammation.

1277

01:13:25,640 --> 01:13:29,560

So likely the inflammation is really pushing that.

1278

01:13:29,760 --> 01:13:32,240

And it's really just taking

1279

01:13:33,440 --> 01:13:39,680

it, impacting the inflammation in your body, which then encourages cancer cells to grow.

1280

01:13:39,880 --> 01:13:44,680

I did have a note to routinely sleeping, sleeping less than seven hours a night

1281

01:13:44,680 --> 01:13:46,560

doubles the risk of cancer.

1282

01:13:46,760 --> 01:13:51,160

Yeah, the mechanism there is assumed to be the immune system.

1283

01:13:51,160 --> 01:13:55,040

Like your immune system just can't fight off what it would if you were sleeping.

1284

01:13:55,240 --> 01:13:56,560

Well, this is it.

1285

01:13:56,760 --> 01:14:00,520

This is the conversation even though I was having right at the beginning of COVID is,

1286

01:14:00,720 --> 01:14:04,200

you know, we were asking our first responders to be and our doctors and

1287

01:14:04,400 --> 01:14:08,840

nurses to hold the front line, and yet they were arguably some of the most

1288

01:14:09,040 --> 01:14:11,840

immunocompromised, you know, people of any profession.

1289

01:14:11,840 --> 01:14:15,640

Now, outside of obviously, you know, morbid obesity and all that kind of stuff.

1290

01:14:15,840 --> 01:14:18,240

So talk to me about that, the impact,

1291

01:14:18,440 --> 01:14:21,600

see deprivation on the immune system specifically.

1292

01:14:21,800 --> 01:14:25,520

It just I mean, it you just cannot operate.

1293

01:14:25,720 --> 01:14:29,320

Your body is not designed to operate without sleep.

1294

01:14:29,520 --> 01:14:32,360

I think my favorite, like level setting

1295

01:14:32,560 --> 01:14:36,880

on this actually did come from Walker's book where he talks about that

1296

01:14:37,080 --> 01:14:40,960

of all the stupid things that are done with the Guinness Book of World Records.

1297

01:14:40,960 --> 01:14:44,920

They don't allow people to go the longest without sleep.

1298

01:14:45,120 --> 01:14:49,040

Because it's so dangerous, like there's that guy who created a sonic boom with his

1299

01:14:49,240 --> 01:14:54,360

body, and that's in the Guinness Book of World Records, some 39,000 feet in the air

1300

01:14:54,560 --> 01:14:57,120

or whatever, but going without sleep is that dangerous.

1301

01:14:57,320 --> 01:15:04,080

But, you know, that's it's not I I saw a firefighter in L.A.

1302

01:15:04,280 --> 01:15:08,360

L.A. County who happened to be on he was

1303

01:15:08,360 --> 01:15:13,280

at the second busiest house in the country and I saw him 72 hours after he'd got

1304

01:15:13,280 --> 01:15:16,320

I was there when he got on shift and I saw him 72 hours later when I was doing a data

1305

01:15:16,320 --> 01:15:18,520

collection like it didn't even look like the same person.

1306

01:15:18,720 --> 01:15:20,680

And you just and I guarantee you that was

1307

01:15:20,880 --> 01:15:23,320
not the only time he'd worked a 72 hour shift.

1308
01:15:23,520 --> 01:15:28,160
Your body just is not made for that.

1309
01:15:28,360 --> 01:15:33,400
Speaking of research, though, I've got a friend, Miguel, who was a recon Marine,

1310
01:15:33,600 --> 01:15:38,280
but also got into their human performance side and he was asking me about research.

1311
01:15:38,280 --> 01:15:40,840
And I'm sure I'd said that, you know, about you being one of the people I know

1312
01:15:41,040 --> 01:15:45,200
that really is doing this kind of overall health research.

1313
01:15:45,400 --> 01:15:47,960
And he said, you know, what would the study have to look like?

1314
01:15:47,960 --> 01:15:53,600
And I was like, well, you'd have to basically get a group of people to be awake

1315
01:15:53,800 --> 01:15:59,640
for some or all of 24 hours for, you know, a month and obviously have another group

1316
01:15:59,840 --> 01:16:03,280
that's not. And he goes, you know, what's crazy?

1317
01:16:03,480 --> 01:16:06,880
He said that would never get past an ethics committee in a study.

1318

01:16:06,880 --> 01:16:09,680

So when people say to me, James, can you show me the research?

1319

01:16:09,680 --> 01:16:13,280

I'm like, no, because no one in their fucking right mind would actually put

1320

01:16:13,480 --> 01:16:16,440

normal people through what they were put through.

1321

01:16:16,640 --> 01:16:20,680

Right now, there's yeah, no.

1322

01:16:20,880 --> 01:16:27,320

We and I think what we are trying to start doing it, we're just trying to start to.

1323

01:16:27,520 --> 01:16:31,320

Why can I not talk to well, because they didn't get enough sleep last night.

1324

01:16:31,520 --> 01:16:34,360

You're a subject for this conversation.

1325

01:16:34,360 --> 01:16:39,560

Right. Sarah seems like an idiot because she got in late on her flight.

1326

01:16:39,760 --> 01:16:46,240

But what I do think we can start doing is really specifically studying

1327

01:16:46,440 --> 01:16:51,320

busy departments and the busiest stations at the busiest departments,

1328

01:16:51,520 --> 01:16:55,240

because one of the challenges with what we've done and did in the past.

1329

01:16:55,440 --> 01:16:59,360

I should not have scheduled this podcast when I would be sleep deprived.

1330

01:16:59,360 --> 01:17:01,400

I didn't realize I would be this sleep deprived.

1331

01:17:01,400 --> 01:17:05,960

But when we did like our we did a study called Field of Fight,

1332

01:17:06,160 --> 01:17:10,040

it's 20 departments, Maine to Guam, and we did study and survey on

1333

01:17:10,240 --> 01:17:14,920

excessive daytime sleepiness, like it was obviously linked to working 48 hours

1334

01:17:15,120 --> 01:17:19,920

or more linking shifts, independent or private sleeping quarters

1335

01:17:19,920 --> 01:17:23,040

was sleep promoting and decreased excessive daytime sleepiness.

1336

01:17:23,240 --> 01:17:28,480

But what we did where we screwed up is we just classified the departments

1337

01:17:28,480 --> 01:17:31,440

by the shift schedule that they worked. Right.

1338

01:17:31,640 --> 01:17:36,000

And some of these departments had we had, like I said, LA County was in it.

1339

01:17:36,200 --> 01:17:41,160

One of them was the second busiest truck or second busiest house in the country,

1340

01:17:41,360 --> 01:17:45,360

I think, and then another one like we went in, we sat down, we had coffee,

1341

01:17:45,560 --> 01:17:48,840

we kicked, but they didn't have one call the entire time we were there.

1342

01:17:49,040 --> 01:17:53,040

And so we've done that where we've classified based on the department is

1343

01:17:53,040 --> 01:17:58,080

a 24, 48 or the department's, you know, and not classified on.

1344

01:17:58,280 --> 01:18:00,720

But how many calls did this person run?

1345

01:18:00,920 --> 01:18:04,480

So when we average out or averaging, well, it doesn't look that bad.

1346

01:18:04,480 --> 01:18:09,240

That's because you have people who sleep all night at an airport station and people

1347

01:18:09,440 --> 01:18:12,360

who are so so these people are great.

1348

01:18:12,360 --> 01:18:15,080

These people are horrible, but it looks on average like they're OK.

1349

01:18:15,280 --> 01:18:18,160

So that's what that's and that's where research is going is.

1350

01:18:18,360 --> 01:18:19,720

All right. If we're going to study this,

1351

01:18:19,720 --> 01:18:24,760

we have to study the busiest fire departments and the busiest stations in

1352

01:18:24,960 --> 01:18:27,920

the fire departments to really get there. But yeah, you're right.

1353

01:18:28,120 --> 01:18:33,440

You could not randomize people to the condition that you could not randomize

1354

01:18:33,640 --> 01:18:36,000

people to that condition of just don't sleep.

1355

01:18:36,200 --> 01:18:37,480

Yeah. No.

1356

01:18:37,680 --> 01:18:41,520

Well, with that, one of the pushbacks I get is like, oh, well, there's, you know,

1357

01:18:41,720 --> 01:18:46,000

we've got the station out in the woods and they only run once a week.

1358

01:18:46,000 --> 01:18:48,120

You tell me that they need to do a 24 72.

1359

01:18:48,120 --> 01:18:49,480

And I'm like, yeah.

1360

01:18:49,680 --> 01:18:52,200

How many times have you been into an apartment building,

1361

01:18:52,400 --> 01:18:55,400

seen a security guard sitting there reading a book or whatever?

1362

01:18:55,600 --> 01:18:59,400

Do you shout at him and say, why are you not in a fist fight with a bad guy right

1363

01:18:59,600 --> 01:19:02,840

now? No, he's he or she are there for when you need them.

1364

01:19:03,040 --> 01:19:06,440

And arguably, usually out in the past, just stations, you know, these are all

1365

01:19:06,440 --> 01:19:10,400

firefighters that kind of paid their dues in the meat grinder and transitioned out

1366

01:19:10,600 --> 01:19:13,800

to somewhere a little slower, but they're already screwed.

1367

01:19:14,000 --> 01:19:14,960

Yeah, exactly. Yeah.

1368

01:19:14,960 --> 01:19:15,920

They're just waiting for cancer.

1369

01:19:15,920 --> 01:19:21,360

Just like they said. But, you know, so so to not advocate for all the people who are

1370

01:19:21,560 --> 01:19:26,560

just getting murdered every day in stations because of the off chance that you might

1371

01:19:26,760 --> 01:19:30,920

make it a little easier for someone who's got it easy is complete insanity.

1372

01:19:30,920 --> 01:19:34,600

And it would be like, you know, the full time transatlantic pilot is held to

1373

01:19:34,800 --> 01:19:39,840

aviation sleep standards and then the UPS guy that works part time flying.

1374

01:19:40,040 --> 01:19:42,840

They go, oh, yeah, we can't fix full time

1375

01:19:42,840 --> 01:19:46,760

because Steve, the part timer, it will be easy. It doesn't make it makes no sense.

1376

01:19:46,760 --> 01:19:49,840

Another industry. But this is what I get over and over again.

1377

01:19:49,840 --> 01:19:53,240

And it's like, well, if you've got more time off, then you just have an opportunity

1378

01:19:53,440 --> 01:19:57,400

to rest, but also to train because those quiet stations need to be ready as well.

1379

01:19:57,600 --> 01:20:03,680

Right. Well, and you still have both of those people in the same department, right?

1380

01:20:03,880 --> 01:20:05,040

Working the same shifts.

1381

01:20:05,240 --> 01:20:07,040

And so.

1382

01:20:07,240 --> 01:20:12,600

You have to plan for the person who is getting their ass handed to them.

1383

01:20:12,600 --> 01:20:18,040

The most like and then you figure out, you know, the rest goes where the rest goes.

1384

01:20:18,240 --> 01:20:20,920

But you can't plan on

1385

01:20:21,120 --> 01:20:25,680

the quietest, least busy like you would never do that.

1386

01:20:25,880 --> 01:20:28,040

It's like you said, the transatlantic guy,

1387

01:20:28,040 --> 01:20:31,840

you don't ever go like, we're going to only require him to do what Steve does.

1388

01:20:32,040 --> 01:20:37,200

No, you're going to require Steve to like same same story.

1389

01:20:37,400 --> 01:20:40,040

You've got to you have to plan for a worst case scenario.

1390

01:20:40,040 --> 01:20:42,640

Like that's what the entire fire service is about.

1391

01:20:42,840 --> 01:20:44,280

Right.

1392

01:20:44,480 --> 01:20:48,000

Or when it comes to our people, but we know whatever.

1393

01:20:48,200 --> 01:20:49,360

Exactly. Exactly.

1394

01:20:49,360 --> 01:20:51,240

As I said, we're we're amazing at burying

1395

01:20:51,240 --> 01:20:54,840

our women, which is really shit at stopping them dying in the first place.

1396

01:20:55,040 --> 01:20:56,960

Yeah. Yeah. Yeah.

1397

01:20:57,160 --> 01:20:58,200

Well, we're going to fix that.

1398

01:20:58,400 --> 01:21:00,600

All right. Well, speaking of that, though, good segue.

1399

01:21:00,800 --> 01:21:03,120

There has been.

1400

01:21:03,320 --> 01:21:05,640

I mean, we're talking nationally.

1401

01:21:05,840 --> 01:21:08,520

I've done this for almost eight years now.

1402

01:21:08,520 --> 01:21:12,720

And it's the same kind of perceived figures observationally.

1403

01:21:12,920 --> 01:21:17,080

But the figures that I've seen is that we die on average within five years

1404

01:21:17,280 --> 01:21:21,400

after retirement and about 12 years younger than the population.

1405

01:21:21,600 --> 01:21:25,640

Now, again, you know, there's there's going to be a spectrum of places where it's

1406

01:21:25,840 --> 01:21:30,440

better or worse, but over and over and over again, that that number five after

1407

01:21:30,640 --> 01:21:34,560

retirement law enforcement as well seems to be a very observational thing.

1408

01:21:34,560 --> 01:21:35,880

Like there are men and women, they are

1409

01:21:35,880 --> 01:21:40,320

watching them die, you know, a few short years after they retire a lot of time.

1410

01:21:40,520 --> 01:21:43,000

So what have you seen from a scientific

1411

01:21:43,200 --> 01:21:47,720

point of view as far as the longevity of these men and women that give 25,

1412

01:21:47,920 --> 01:21:54,200

30 years of their lives and then finally get to close to or retirement age?

1413

01:21:54,400 --> 01:21:55,720

So here's what I want.

1414

01:21:55,920 --> 01:21:59,440

And I would love if you have any access to that data, because I've heard that

1415

01:21:59,640 --> 01:22:03,760

before and I've had a hard time validating that that five number.

1416

01:22:03,760 --> 01:22:07,960

So that's why I would if you have any data or if anyone who's listening has that

1417

01:22:08,160 --> 01:22:12,320
data, I would love to see it. There was early on.

1418
01:22:12,520 --> 01:22:15,680
Someone told me that there was like a dissertation that quoted it.

1419
01:22:15,880 --> 01:22:19,960
But I'm trying to track data down on that.

1420
01:22:20,160 --> 01:22:21,520
So that's what I would like to know.

1421
01:22:21,720 --> 01:22:22,760
Yeah. Well, that's the issue.

1422
01:22:22,760 --> 01:22:24,160
Like I said, we don't have research.

1423
01:22:24,360 --> 01:22:26,920
A lot of times, observation is all we do have.

1424
01:22:27,120 --> 01:22:30,720
But then again, we're also looking at

1425
01:22:30,920 --> 01:22:32,280
should I had a comment on that?

1426
01:22:32,280 --> 01:22:34,960
Oh, I also we're looking on average at that.

1427
01:22:35,160 --> 01:22:39,960
So if you think overall, you would expect firefighters to live longer.

1428

01:22:39,960 --> 01:22:41,800

If all other things were created equally,

1429

01:22:41,800 --> 01:22:47,240

you would expect them to live longer because you're looking at averages and.

1430

01:22:47,440 --> 01:22:49,920

You would expect that

1431

01:22:50,120 --> 01:22:54,200

because they're actively working like the healthy worker effects that they should be

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01:22:54,400 --> 01:22:58,160

living longer, so it but if you have data on that, I would love to see it because

1433

01:22:58,160 --> 01:23:03,200

that's that's one that I've always tried to track down and have not had much luck.

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01:23:03,400 --> 01:23:05,040

Yeah. And I bet you it's probably because

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01:23:05,040 --> 01:23:08,600

they there's a resistance to that information because then we'll realize

1436

01:23:08,600 --> 01:23:12,200

that we are killing our firefighters because I've always said it shouldn't even

1437

01:23:12,200 --> 01:23:14,400

be equal to the average person in our community.

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01:23:14,600 --> 01:23:18,640

I would argue that your firefighters are some of the fittest, most resilient men

1439

01:23:18,840 --> 01:23:20,720
and women when they enter that career.

1440
01:23:20,920 --> 01:23:23,760
And so really, we should be living longer than a lot of the community.

1441
01:23:23,960 --> 01:23:25,280
Not not sure.

1442
01:23:25,480 --> 01:23:27,920
Yeah, I have not done a search on that in a while.

1443
01:23:27,920 --> 01:23:29,800
So now I'm going to go do that and I'll let you know.

1444
01:23:30,000 --> 01:23:31,320
Brilliant. All right.

1445
01:23:31,520 --> 01:23:37,120
Well, then let's transition now to, as I mentioned, you know, if if really

1446
01:23:37,320 --> 01:23:41,280
investing in your people and their well-being isn't something that motivates

1447
01:23:41,480 --> 01:23:44,840
you to advocate for change, then sadly, we're back to money.

1448
01:23:45,040 --> 01:23:51,680
So what are your observations on the false economy of the way our firefighters are

1449
01:23:51,880 --> 01:23:54,800
being worked and then the potential comes?

1450

01:23:55,000 --> 01:23:57,680

Obviously isn't an area that you've studied specifically, but

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01:23:57,680 --> 01:24:01,760

you know, if you take that money from downstream and invest it upstream and

1452

01:24:01,960 --> 01:24:06,840

create an extra shift, so now you have a four platoon system and a 72 hour period

1453

01:24:07,040 --> 01:24:11,720

to recover, what what would you hypothesize as far as

1454

01:24:11,920 --> 01:24:15,200

the financial benefit to a city or a county?

1455

01:24:15,400 --> 01:24:18,240

So I I think that we will see.

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01:24:18,440 --> 01:24:21,040

I mean, you you have like the obvious,

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01:24:21,240 --> 01:24:24,280

you know, not having to pay as much overtime, those types of things.

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01:24:24,280 --> 01:24:30,080

And I think that's low hanging fruit. But I also I think that you would see

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01:24:30,280 --> 01:24:34,600

there was one department out of that just went to a longer shift and they were

1460

01:24:34,800 --> 01:24:39,840

reporting increased rates of mistakes on EMS calls.

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01:24:39,840 --> 01:24:41,040

So I think you're right on that.

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01:24:41,040 --> 01:24:45,120

I think that, you know, if we shorten that, if we I think, you know,

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01:24:45,320 --> 01:24:50,520

honestly, I think with improved sleep, you should see pretty much everything

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01:24:50,520 --> 01:24:56,600

improve, you know, everything from like your lost work days, from people

1465

01:24:56,800 --> 01:25:01,520

getting colds and flus, you know, like just immune system pieces,

1466

01:25:01,720 --> 01:25:06,960

everything from that to the injuries to the and it would depend on injuries like

1467

01:25:07,160 --> 01:25:11,440

they're that's where we're going to really need to look at the the stations,

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01:25:11,640 --> 01:25:14,840

the busy stations, the busy departments.

1469

01:25:15,040 --> 01:25:16,920

But I think you should really see everything improve.

1470

01:25:16,920 --> 01:25:19,680

I think you should see overall health and wellness improve.

1471

01:25:19,680 --> 01:25:21,440

I think you should see,

1472

01:25:21,640 --> 01:25:24,880

you know, we know that obesity is related to more lost work days.

1473

01:25:25,080 --> 01:25:26,840

And I think it was like an average like

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01:25:27,040 --> 01:25:30,560

fifteen hundred dollars more per firefighter per year that is obese for

1475

01:25:30,760 --> 01:25:33,280

related to injuries, I think is what it was calculated at.

1476

01:25:33,480 --> 01:25:34,440

So you should see those.

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01:25:34,640 --> 01:25:38,560

You should see less, you know, less obesity and more

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01:25:38,760 --> 01:25:42,720

and less injuries because so much of so much of the injuries are driven.

1479

01:25:42,920 --> 01:25:45,640

So many of the injuries are driven by things like

1480

01:25:45,840 --> 01:25:49,560

like musculoskeletal strains, sprains, those types of things.

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01:25:49,560 --> 01:25:53,280

So I think you I think and I don't know, you know, and I get it.

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01:25:53,280 --> 01:25:55,120

We need the empirical evidence to back this up.

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01:25:55,120 --> 01:25:58,960

So we're trying to design the studies in a way that we can capture these pieces.

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01:25:59,160 --> 01:26:02,360

But I think you would overall see everything

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01:26:02,560 --> 01:26:06,960

like fewer workers, compensation claims, less likelihood of people going out

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01:26:06,960 --> 01:26:08,520

on disability, those types of things.

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01:26:08,720 --> 01:26:13,000

I mean, I think it will improve overall mental health

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01:26:13,200 --> 01:26:17,440

injury like I my hypothesis is all of it would get better.

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01:26:17,440 --> 01:26:19,800

But we'll have to see. It's an empirical question.

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01:26:20,000 --> 01:26:20,800

Yeah.

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01:26:21,000 --> 01:26:22,080

I ask it.

1492

01:26:22,280 --> 01:26:26,560

I think, again, going back to what makes sense, I mean, obviously it makes sense

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01:26:26,760 --> 01:26:28,080

with the injuries was interesting.

1494

01:26:28,080 --> 01:26:30,200

You asked me about sleep when I was doing sport science.

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01:26:30,200 --> 01:26:32,040

The other thing that I did learn is that

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01:26:32,240 --> 01:26:35,560

when you sleep is after breaking down the muscles through training, it's when

1497

01:26:35,760 --> 01:26:39,760

you're rebuilding and so your muscles, your tendons, your ligaments,

1498

01:26:39,960 --> 01:26:42,880

that's when they rebuild after the stresses of the day.

1499

01:26:43,080 --> 01:26:46,680

So if you're taking away that rebuilding time through sleep,

1500

01:26:46,680 --> 01:26:49,000

they always say, oh, it's always the fit guys that get hurt.

1501

01:26:49,200 --> 01:26:52,240

It is because we take our training seriously.

1502

01:26:52,240 --> 01:26:55,560

And not only are we pulling hose and doing drills out in the yard,

1503

01:26:55,760 --> 01:26:59,960

then we're lifting weights or doing CrossFit or ultra marathons or whatever

1504

01:27:00,160 --> 01:27:05,400

the person's thing is. And so there is it's not if it's when you will get a breakdown.

1505

01:27:05,600 --> 01:27:08,160

But again, if you give more rest and recovery,

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01:27:08,360 --> 01:27:12,640

your at your firefighters have become become greater athletes because

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01:27:12,640 --> 01:27:13,800

then they're going to be more resilient.

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01:27:13,800 --> 01:27:15,200

They're not going to get hurt as much.

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01:27:15,200 --> 01:27:18,760

I mean, again, from the strength and conditioning gurus have had on here,

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01:27:18,760 --> 01:27:23,240

they validated that completely, even with the sporting athletes they work with.

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01:27:23,440 --> 01:27:26,720

So I will say because I've heard that, oh, if you don't work out,

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01:27:26,920 --> 01:27:31,200

you're not going to get working out. And I'm like, well, yeah.

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01:27:31,400 --> 01:27:35,560

But if you look at injuries, so, yeah, if you work out,

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01:27:35,760 --> 01:27:41,120

you're more likely to get a some type of like overall rate of injuries higher.

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01:27:41,320 --> 01:27:44,680

But they tend to be minor sprains, strains, those types of things.

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01:27:44,680 --> 01:27:47,760

If you work out particularly, we asked specifically working out on duty,

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01:27:47,960 --> 01:27:52,960

you are half as likely as your colleagues that don't do that to get a fire ground

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01:27:53,160 --> 01:27:59,040

injury, so that catastrophic fire ground break or whatever.

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01:27:59,240 --> 01:28:03,720

So I think that at the end of the day, like, yeah, you might have a strain or sprain.

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01:28:03,920 --> 01:28:07,360

And I think a lot of the programs that really get like knocked for,

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01:28:07,360 --> 01:28:09,440

oh, you're always you're going to get hurt, you're going to get hurt.

1522

01:28:09,640 --> 01:28:11,880

It's because they're programs that people love to do.

1523

01:28:11,880 --> 01:28:13,680

And so they do them more like, yes,

1524

01:28:13,680 --> 01:28:18,000

the more that you work out, the more often you work out, the more

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01:28:18,200 --> 01:28:22,280

the more likely it is you're going to get injured because that's what you're doing.

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01:28:22,480 --> 01:28:24,880

But the more time I spend watching TV,

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01:28:24,880 --> 01:28:28,520

the more likely I'm going to get injured spending, you know, I'm going to get injured

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01:28:28,720 --> 01:28:31,560

watching TV because that's what I'm spending my time doing.

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01:28:31,760 --> 01:28:36,560

So I think the overall like I would much rather have someone get that strain or

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01:28:36,560 --> 01:28:40,360

sprain that can be rehabbed properly and that they are able to fix that faster

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01:28:40,560 --> 01:28:43,280

than a major fire ground injury.

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01:28:43,280 --> 01:28:44,760

Yeah, I agree completely.

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01:28:44,960 --> 01:28:47,760

People would say, you know, you work out on shift and say,

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01:28:47,760 --> 01:28:49,440

aren't you afraid you're going to be tired?

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01:28:49,640 --> 01:28:51,880

I'm like, no, I'm probably going to be fit

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01:28:51,880 --> 01:28:54,400

at the most people in the fire ground, even though I'm tired.

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01:28:54,600 --> 01:28:58,080

And that's the difference. Right. Right.

1538

01:28:58,280 --> 01:29:01,680

All right. Well, then let's let me see here.

1539

01:29:01,680 --> 01:29:04,960

What else? So, yeah, and that's the last thing I want to hit then, really,

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01:29:05,160 --> 01:29:09,560

because we've obviously painted the picture of how this is an impact that can

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01:29:09,560 --> 01:29:13,280

either continue to be negative in the fire service or create some incredible

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01:29:13,280 --> 01:29:17,520

improvements, everything from health to mental health, financial savings.

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01:29:17,720 --> 01:29:22,880

But here we are now at an amazing opportunity to actually start doing some research.

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01:29:23,080 --> 01:29:27,640

Now you've got departments like Boca, sorry, Boynton Beach and then Gainesville

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01:29:27,840 --> 01:29:29,840

in a few months that are literally about to.

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01:29:30,040 --> 01:29:32,080

So if you could capture them right before.

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01:29:32,280 --> 01:29:35,680

And I think I think UF or somewhere around there might be.

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01:29:35,880 --> 01:29:37,120

You know, we've got an option then.

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01:29:37,120 --> 01:29:42,840

So to, you know, to create studies to kind of further,

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01:29:43,040 --> 01:29:46,720

I mean, really capture this horrible system, hopefully, as we start going away

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01:29:46,920 --> 01:29:51,600

from it, what needs to happen, who are the governing bodies and what should be

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01:29:51,800 --> 01:29:55,160

the studies so we can capture this information because we didn't before.

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01:29:55,360 --> 01:29:57,080

All we've got is today.

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01:29:57,280 --> 01:30:01,400

So what we what what has been working well, and I've actually talked to the people

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01:30:01,600 --> 01:30:05,600

in Florida, is we're creating a what are the standard measures that we should all

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01:30:05,600 --> 01:30:11,680

be using so then we can compare because it's the number of variations is like

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01:30:11,880 --> 01:30:16,440

insane, the number of variations, even of shift schedules that you can do.

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01:30:16,640 --> 01:30:20,160

So we're looking at how can we standardize data collection on that?

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01:30:20,360 --> 01:30:24,160

One of the things that we have in that we have a proposal in on, but we also are

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01:30:24,160 --> 01:30:27,920

putting it in and moving forward with an IRB just because we need the data as it

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01:30:28,120 --> 01:30:33,360

evolves is to do all right, let's study these things pre and post

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01:30:33,360 --> 01:30:37,520

with surveys, let's study pre and post where we are in everything from mental

1563

01:30:37,720 --> 01:30:40,960

and physical health to injury and then look three months out.

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01:30:40,960 --> 01:30:42,400

How does it improve sleep?

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01:30:42,400 --> 01:30:45,240

Does it improve all these other health parameters?

1566

01:30:45,440 --> 01:30:47,600

And look at what data we have available.

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01:30:47,800 --> 01:30:50,080

So a couple of departments I've talked to have

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01:30:50,280 --> 01:30:56,600

can access for like fifteen eighty two medical data and their blood work data,

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01:30:56,600 --> 01:31:01,360

those types of things, but even like at the most basic, let's get the survey data out.

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01:31:01,360 --> 01:31:05,120

Let's get people to answer the questions about where things where things fall.

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01:31:05,120 --> 01:31:07,520

So then we can start looking at some of the relationships.

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01:31:07,720 --> 01:31:10,920

So we're going to standardize data collection processes and protocols.

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01:31:11,120 --> 01:31:14,680

The study that we have that's currently under review is studying a couple of

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01:31:14,680 --> 01:31:17,760

departments, they're getting ready to change their shift to start time,

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01:31:17,960 --> 01:31:21,880

but developing that protocol so anyone can use it and then they could just put it

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01:31:22,080 --> 01:31:26,720

in once you have the data in and cleaned, you just basically can run,

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01:31:26,720 --> 01:31:32,320

you know, with the same the magic statisticians can run the analysis

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01:31:32,320 --> 01:31:33,280

for the different departments.

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01:31:33,480 --> 01:31:35,960

So let's you know, let's look at it, let's quantify it.

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01:31:35,960 --> 01:31:38,720

And then I think the faster we're able to quantify it,

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01:31:38,720 --> 01:31:41,600

the further people are going to be able to move forward.

1582

01:31:41,800 --> 01:31:44,040

Yeah, I think I mean, there's a need for capturing it.

1583

01:31:44,040 --> 01:31:45,680

But at the same time, I love that phrase,

1584

01:31:45,680 --> 01:31:47,920

you know, don't wait for science to prove what you already know.

1585

01:31:48,040 --> 01:31:52,520

And so I know some departments are just going to wait and see how this department

1586

01:31:52,720 --> 01:31:54,280

does and you're talking about years.

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01:31:54,280 --> 01:31:57,120

But meanwhile, you're still burying your your firefighters.

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01:31:57,320 --> 01:32:03,640

So, you know, I think the the research is important, but also not waiting for some

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01:32:03,840 --> 01:32:08,520

incredible white paper to validate the fact that, you know, you can stop killing

1590

01:32:08,720 --> 01:32:14,480

your firefighters and like mechanistically, I can't imagine one a scenario

1591

01:32:14,680 --> 01:32:19,000

where it's going to get worse, you know, like there's not one.

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01:32:19,200 --> 01:32:22,360

There are some things that I understand, like, all right, we probably do want to

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01:32:22,360 --> 01:32:26,160

wait for that, you know, does this actually increase carcinogen

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01:32:26,360 --> 01:32:28,520

exposure or decrease it, those types of things.

1595

01:32:28,720 --> 01:32:34,600

But for this, like, I can't imagine a negative like you're not going to start

1596

01:32:34,800 --> 01:32:36,720

to people become more well rested.

1597

01:32:36,720 --> 01:32:39,800

And so then you're going to get more injuries like that doesn't mechanistically

1598

01:32:40,000 --> 01:32:44,520

make sense. So I don't think that's I think that more departments,

1599

01:32:44,720 --> 01:32:46,760

the faster we can get departments to change the better.

1600

01:32:46,960 --> 01:32:49,360

But I think you're always you know, it's that normal curve, right?

1601

01:32:49,360 --> 01:32:50,880

You're going to have your early adopters

1602

01:32:50,880 --> 01:32:55,440

and then you're going to have the people who need who need some more of the data.

1603

01:32:55,440 --> 01:33:00,440

So then we'll get that and then we'll get then and then we'll light it on fire.

1604

01:33:00,640 --> 01:33:03,520

Yeah, well, speaking of early adopters,

1605

01:33:03,520 --> 01:33:06,280

one of the beautiful things that I've heard, some of the people that had the

1606

01:33:06,280 --> 01:33:09,440

courage and this is what we need now, only say there's no downside.

1607

01:33:09,440 --> 01:33:12,520

The downside is you got to look in the mirror and say it's time for me to advocate

1608

01:33:12,720 --> 01:33:16,000

for myself, my family and my people if I'm in a leadership position,

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01:33:16,280 --> 01:33:18,880

because that's all that's left, you know, and if you don't have courage,

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01:33:18,880 --> 01:33:21,920

then step down and let someone else come into it.

1611

01:33:21,920 --> 01:33:25,760

You know, but and then also with such a fragmented profession that it's also,

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01:33:25,760 --> 01:33:26,680

you know, communication.

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01:33:26,680 --> 01:33:30,320

And I've been very vocal about how disappointed I am that our union

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01:33:30,320 --> 01:33:33,600

that beats their chest has never fucking talked about standardizing the workweek.

1615

01:33:33,800 --> 01:33:34,840

Shame on you.

1616

01:33:35,040 --> 01:33:39,320

So it's up to us from the firefighter through to the commissioners to all have

1617

01:33:39,520 --> 01:33:44,120

a courage to say, debunk our own fairy tales, our own myths and then say enough is

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01:33:44,320 --> 01:33:46,760

enough, you know, we're going to force this change.

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01:33:46,760 --> 01:33:51,000

But with the early adopters, a big selling point is we have a recruitment crisis

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01:33:51,000 --> 01:33:52,520

at the moment. Oh, my God.

1621

01:33:52,720 --> 01:33:57,200

I think that's, you know, personally, my opinion is that a big part is that young

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01:33:57,200 --> 01:34:00,680

people are very smart with access to all the information and they're looking

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01:34:00,680 --> 01:34:04,480

at the fire service going, this doesn't look great, you know, and it's the

1624

01:34:04,680 --> 01:34:06,480

profession is, but the environment isn't.

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01:34:06,680 --> 01:34:12,840

So by going to a 24 72, these departments are seeing people lining up around

1626

01:34:13,040 --> 01:34:15,240
their door again, just like the good old days.

1627
01:34:15,240 --> 01:34:18,920
Yep. Oh, 100 percent recruitment and retention.

1628
01:34:19,120 --> 01:34:24,080
I mean, I think that that we have to make it just has to appear more.

1629
01:34:24,280 --> 01:34:26,880
I mean, every meeting I'm in that comes up

1630
01:34:27,080 --> 01:34:30,240
as a key issue that departments across the country are facing.

1631
01:34:30,440 --> 01:34:32,520
And so I think anything and everything we

1632
01:34:32,720 --> 01:34:37,400
can do to make this look like a more attractive, be a more attractive job,

1633
01:34:37,600 --> 01:34:42,520
allow more. I mean, I know that like conceptually older generations are like

1634
01:34:42,520 --> 01:34:44,160
a work life balance. We never had that.

1635
01:34:44,160 --> 01:34:46,200
Well, just because we didn't doesn't mean they shouldn't.

1636
01:34:46,400 --> 01:34:48,680
And maybe it's time we start learning from them.

1637

01:34:48,880 --> 01:34:51,800

Like, you know, sometimes I'm like, oh, work life balance.

1638

01:34:52,000 --> 01:34:55,440

I don't. And I'm like, wait a minute, maybe I should be taking the time off.

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01:34:55,640 --> 01:35:00,400

You know, maybe I don't have to wake up every morning and

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01:35:00,600 --> 01:35:02,600

get an hour's worth of work in before the kids get up.

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01:35:02,800 --> 01:35:06,800

Maybe I could drink coffee and kick my feet up.

1642

01:35:07,000 --> 01:35:10,680

So I think that there's some really cool things coming with the next generation.

1643

01:35:10,880 --> 01:35:12,640

And I do think they have more of an

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01:35:12,640 --> 01:35:15,440

understanding of things like the importance of sleep, because I think a lot

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01:35:15,440 --> 01:35:18,160

of the people, honestly, who are not pushing for this yet,

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01:35:18,360 --> 01:35:21,760

don't understand how important sleep is.

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01:35:22,000 --> 01:35:25,320

You know, it seems like that's just I mean, sleep is a luxury.

1648

01:35:25,320 --> 01:35:26,360

You can sleep when you die.

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01:35:26,560 --> 01:35:29,240

Well, you will die sooner if you don't get enough sleep.

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01:35:29,440 --> 01:35:35,080

So, yeah, well, I always tell the ones that are resistant to not only the sleep

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01:35:35,080 --> 01:35:39,000

conversation, but also the mental health conversation about addressing some things

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01:35:39,000 --> 01:35:43,880

that you've just buried down and filled alcohol over is performance.

1653

01:35:44,080 --> 01:35:47,160

You know, there's a lot of guys that, you know, wear their leather helmets and grow

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01:35:47,160 --> 01:35:51,440

out their moustaches, but they talk about it's for them being in their chest.

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01:35:51,440 --> 01:35:53,320

And so, OK, well, let's break that down for a second.

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01:35:53,360 --> 01:35:55,040

If you're worried about performance,

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01:35:55,080 --> 01:35:58,120

then you need to address the things that are crazy in your mind.

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01:35:58,120 --> 01:36:01,760

So you can actually have a relaxed mind to get into a flow state and maybe

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01:36:01,760 --> 01:36:05,520

visualize that bedroom you're searching and finding that child under the bed.

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01:36:05,720 --> 01:36:08,280

But the same thing applies to sleep deprivation.

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01:36:08,280 --> 01:36:09,920

Find your favorite athlete.

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01:36:10,120 --> 01:36:14,760

I guarantee you they've got psychologists and all kinds of people working on their

1663

01:36:14,960 --> 01:36:19,120

sleep at a guy on the show, Nick Littlehales, who literally travels with teams

1664

01:36:19,320 --> 01:36:22,680

and they have their own bedding role for the athlete that they put on the floor.

1665

01:36:22,880 --> 01:36:24,360

So they optimize their sleep.

1666

01:36:24,560 --> 01:36:29,080

But you're telling me you're advocating for a shittier work week that will make

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01:36:29,280 --> 01:36:32,720

you far worse cognitively, and yet it's for them.

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01:36:32,920 --> 01:36:36,040

And if it's really for them, doesn't that include your family?

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01:36:36,040 --> 01:36:39,000

So why are you pushing against the very thing that will get you home more?

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01:36:39,200 --> 01:36:41,480

So even all those conversations, you know,

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01:36:41,480 --> 01:36:45,840

it's this rah rah bullshit that I'm so fucking sick of rather than truly booing.

1672

01:36:45,840 --> 01:36:47,000

OK, it's for them.

1673

01:36:47,040 --> 01:36:48,880

Well, then let's actually look what that looks like.

1674

01:36:49,080 --> 01:36:52,360

What are the high performing groups around the world do for them?

1675

01:36:52,560 --> 01:36:56,640

Self care is a huge part, because if you're not in the highest level

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01:36:56,840 --> 01:37:01,160

of physical and mental performance, you might fail and you might push that

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01:37:01,160 --> 01:37:06,360

wrong drug or miss the tube or miss a child in the search or shit the bed

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01:37:06,360 --> 01:37:08,800

while you're holding your, you know, your extrication tools.

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01:37:09,000 --> 01:37:13,920

So even from that point of view, the naysayers, OK, so you're literally voting

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01:37:14,120 --> 01:37:18,040

to be a shittier firefighter. That's what you're saying.

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01:37:18,240 --> 01:37:20,480

I yeah, that sounds good.

1682

01:37:20,680 --> 01:37:23,040

That sounds makes sense to me.

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01:37:23,240 --> 01:37:25,200

Yeah, that was a rant. I'm sorry.

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01:37:25,400 --> 01:37:30,480

No, I mean, I can't I can't disagree with you, but I think things are changing.

1685

01:37:30,480 --> 01:37:32,560

Like I'm going to be.

1686

01:37:33,720 --> 01:37:37,360

Optimistic, I think we're going to I think I think it's changing,

1687

01:37:37,360 --> 01:37:41,520

like I think this is culture change, and I think it's, you know, having you beat

1688

01:37:41,720 --> 01:37:44,360

this drum and getting the.

1689

01:37:44,560 --> 01:37:49,280

You know, getting data in the hands of people, all that kind of stuff that I think

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01:37:49,480 --> 01:37:51,040

will.

1691

01:37:51,840 --> 01:37:55,000

Move the needle like I think we I think we.

1692

01:37:55,000 --> 01:38:00,440

I think that we are at a point in chain of change.

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01:38:00,640 --> 01:38:01,560

Yeah, I agree.

1694

01:38:01,760 --> 01:38:04,960

And this is why these conversations need to happen, because there are a lot of

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01:38:04,960 --> 01:38:08,640

conversations about how great the job is and it is, you know, I lived it.

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01:38:08,840 --> 01:38:10,720

But these are the uncomfortable

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01:38:10,720 --> 01:38:14,040

conversations that we have to have about literally reframing the way we think

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01:38:14,040 --> 01:38:18,080

about this stuff. But if we want to, you know, improve our health and performance

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01:38:18,080 --> 01:38:21,680

and stop going to so many funerals with bagpipes and last bells,

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01:38:21,880 --> 01:38:23,240

then this is the conversation.

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01:38:23,240 --> 01:38:26,120

This is the courage that a firefighter has.

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01:38:26,320 --> 01:38:28,080

This is where it needs to be applied is

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01:38:28,280 --> 01:38:32,360

to finally advocate and push change and get this work week fixed.

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01:38:32,360 --> 01:38:34,680

And then we can start hitting some of the other areas.

1705

01:38:34,880 --> 01:38:37,080

Yeah, I agree.

1706

01:38:37,280 --> 01:38:39,400

Any closing thoughts, any other areas you

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01:38:39,600 --> 01:38:43,600

want to kind of throw in there before we close this up?

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01:38:43,800 --> 01:38:46,440

I think we covered all of the topics.

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01:38:46,640 --> 01:38:50,680

I would just say that, like, I think my closing is that like this is change

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01:38:50,680 --> 01:38:55,440

happening. You know, it's not happening as fast as you or I would want,

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01:38:55,640 --> 01:38:57,200

but it's happening pretty fast.

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01:38:57,400 --> 01:39:01,360

Like if you look traditionally at the whole, you know, the tradition of the fire

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01:39:01,560 --> 01:39:04,800

service and and things were slow to change, like.

1714

01:39:05,000 --> 01:39:09,200

I think we're going at a pretty good clip comparatively.

1715

01:39:09,400 --> 01:39:10,840

Like, is it as fast as business?

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01:39:11,040 --> 01:39:12,400

No, but.

1717

01:39:12,880 --> 01:39:15,960

I'm going to I will remain optimistic

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01:39:16,160 --> 01:39:19,640

that we are on the precipice of change.

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01:39:19,640 --> 01:39:23,440

I said the revolution has begun on my post because I believe that I really do.

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01:39:23,640 --> 01:39:25,600

So the paradigm shift.

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01:39:25,800 --> 01:39:27,520

You're having a podcast about this.

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01:39:27,560 --> 01:39:30,080

I've been invited to speak on this multiple times.

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01:39:30,280 --> 01:39:33,400

And now there are several Joel and

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01:39:33,920 --> 01:39:39,200

Joel Billings was funded by FEMA to basically redo the sleep.

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01:39:40,960 --> 01:39:45,720

Like the summary and sleep that Kerry Kuehl's group did decades, probably two

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01:39:45,720 --> 01:39:50,280

decades ago, he's updating that now and bringing together sleep scientists to

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01:39:50,480 --> 01:39:54,320

discuss like what we need to be talking about, like, oh, that would not have

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01:39:54,520 --> 01:39:56,600

happened 10 years ago.

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01:39:56,800 --> 01:39:58,560

Brilliant. Well, I'm so excited.

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01:39:58,560 --> 01:39:59,640

So thank you so much.

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01:39:59,640 --> 01:40:01,000

I mean, obviously, we just kind of really

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01:40:01,200 --> 01:40:05,800

focused on this one particular topic this time, but hopefully now people, you know,

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01:40:05,800 --> 01:40:09,280

when they have that, I need the research will understand where there is research

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01:40:09,280 --> 01:40:12,240

and then where there's not. And obviously, the if you really want

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01:40:12,240 --> 01:40:16,240

research, I've got Rachel Mulquall from the Navy, Kirk Parsley from Navy Seals,

1736

01:40:16,440 --> 01:40:21,160

Alison Breger from the Army, you know, I've got sleep people, you know, from very

1737

01:40:21,360 --> 01:40:24,480

comparable positions if you absolutely need them.

1738

01:40:24,680 --> 01:40:26,080

Yeah, they figured it out.

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01:40:26,280 --> 01:40:27,040

We will, too.

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01:40:27,240 --> 01:40:30,280

Absolutely. But I want to thank you so much because this was needed.

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01:40:30,480 --> 01:40:35,080

You know, this this hopefully now will kind of appease some of those those

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01:40:35,280 --> 01:40:39,120

needs for research and understand that, you know, in areas we just don't have it.

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01:40:39,120 --> 01:40:41,640

And then, you know, in other areas, take a step back and go, well,

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01:40:41,640 --> 01:40:43,400

this is actually common sense.

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01:40:43,600 --> 01:40:47,880

So and then in other areas still, you've got the papers that you talked about.

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01:40:48,080 --> 01:40:51,880

And even the research that we don't have yet, like we have a close enough

1747

01:40:52,080 --> 01:40:56,040
approximation that we can make pretty, pretty certain statements on.

1748
01:40:56,240 --> 01:40:58,280
So, well, thank you so much.

1749
01:40:58,280 --> 01:40:59,720
I mean, it's been such an important

1750
01:40:59,920 --> 01:41:04,360
conversation and an absolutely invaluable part of this kind of group of

1751
01:41:04,560 --> 01:41:09,880
conversations to hopefully make the case where people will understand the importance

1752
01:41:09,880 --> 01:41:14,400
of this work week conversation and advocate for change in their own department.

1753
01:41:14,600 --> 01:41:16,360
Well, and thanks for continuing to push

1754
01:41:16,560 --> 01:41:18,880
this issue, because I know it gets frustrating.

1755
01:41:19,080 --> 01:41:23,120
Occasionally I have like these what the fuck are we doing moments like

1756
01:41:23,320 --> 01:41:24,480
nothing's changing.

1757
01:41:24,680 --> 01:41:28,160
But then I look around and I'm like, no, this is this is progress.

1758

01:41:28,360 --> 01:41:31,080

It's slow, but it's progress.

1759

01:41:31,080 --> 01:41:43,600

It wouldn't be happening without you doing stuff like this.